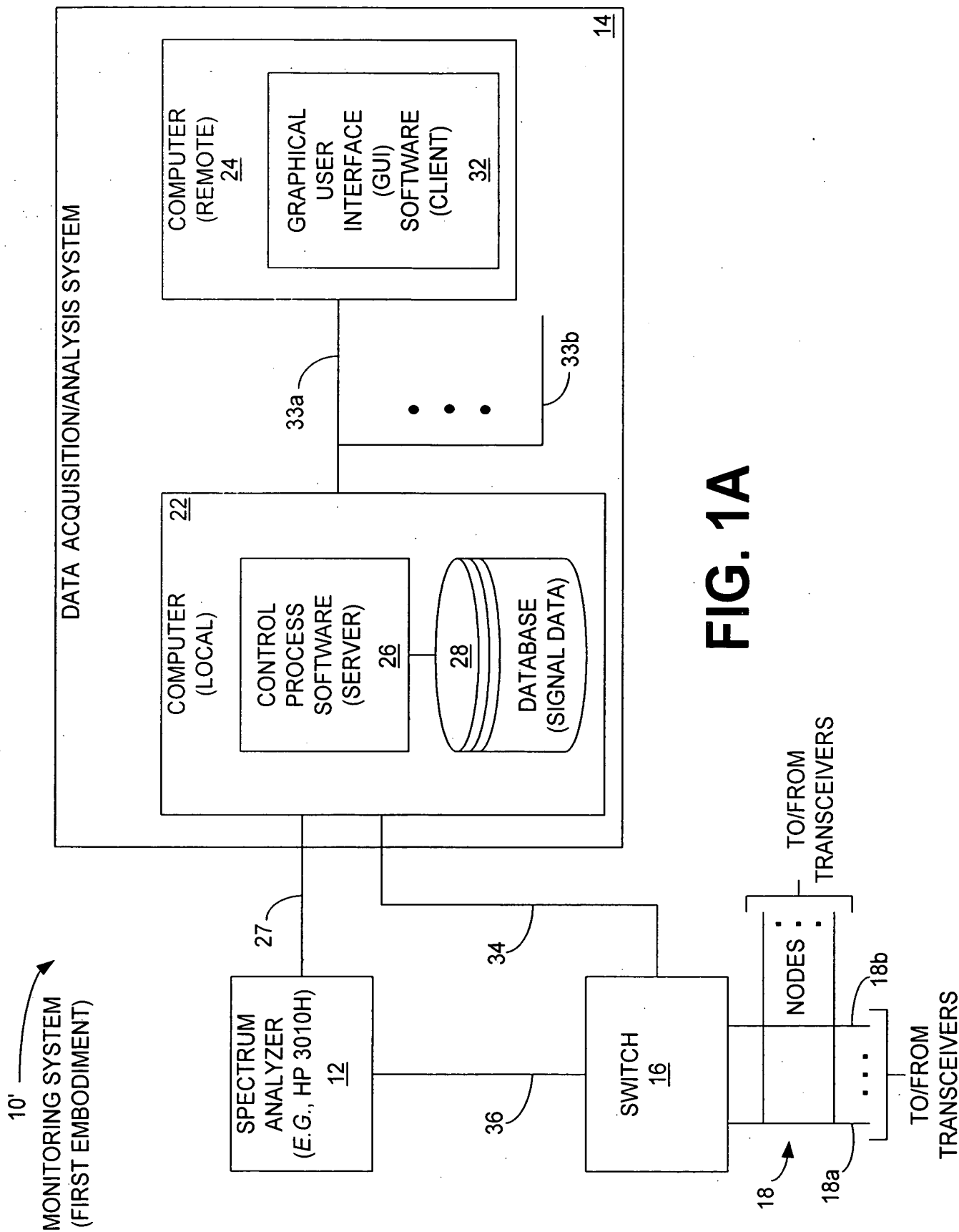


09/451286



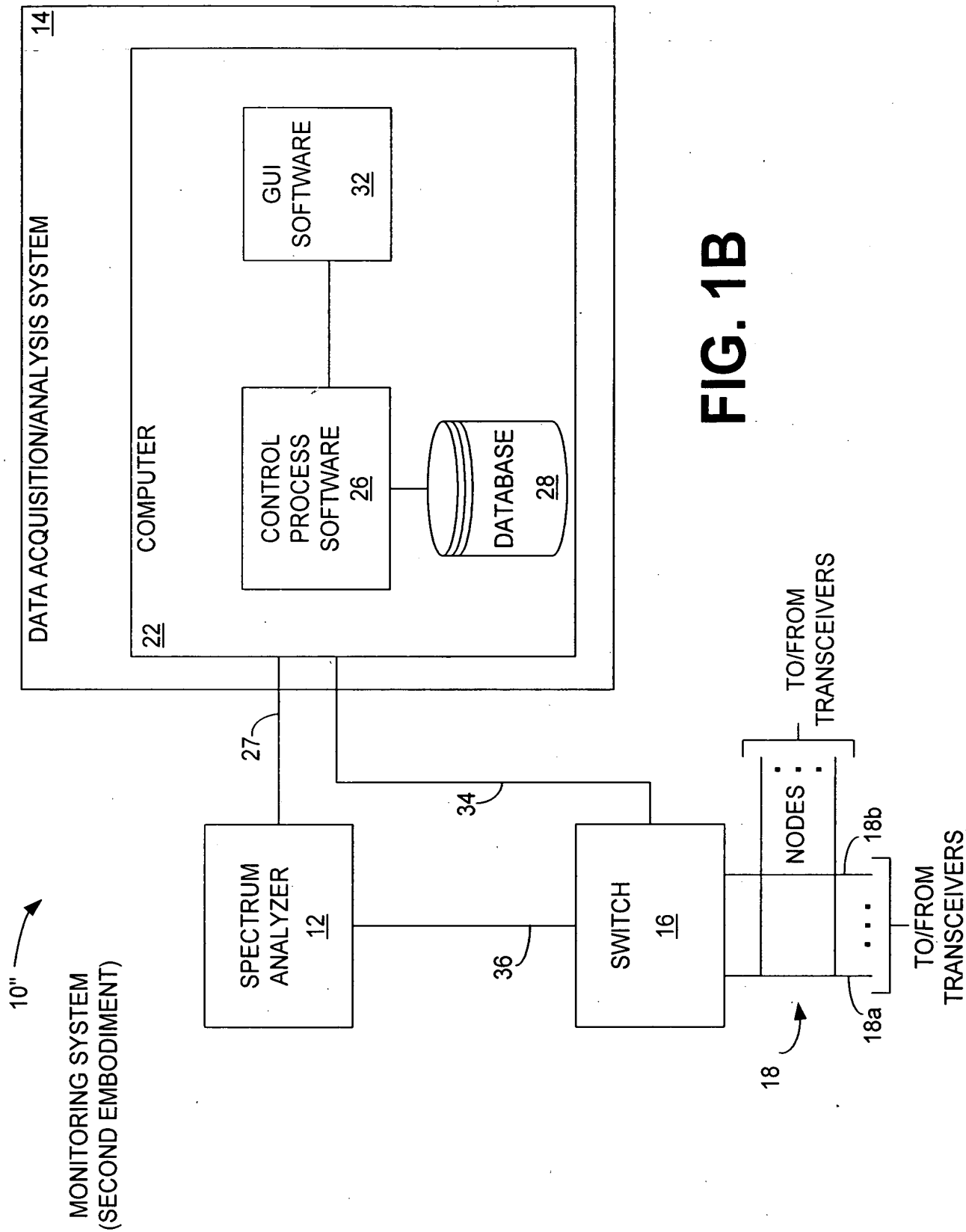
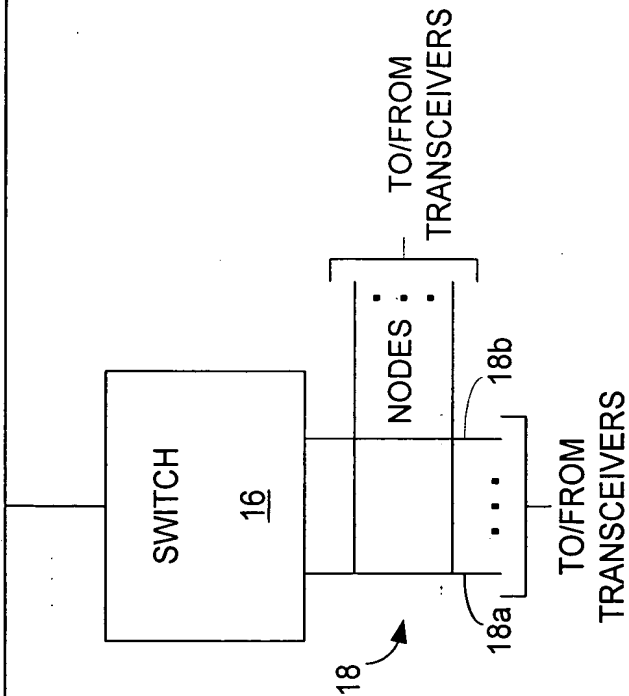
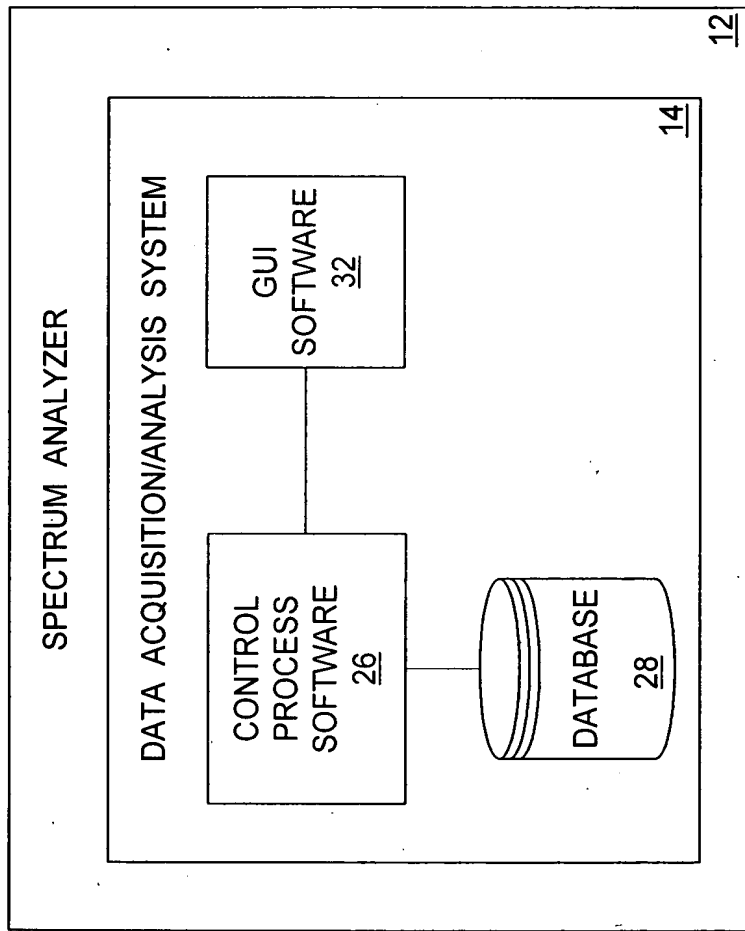


FIG. 1B



10"

MONITORING SYSTEM
(THIRD EMBODIMENT)

FIG. 1C

DATA STRUCTURE OF DATABASE

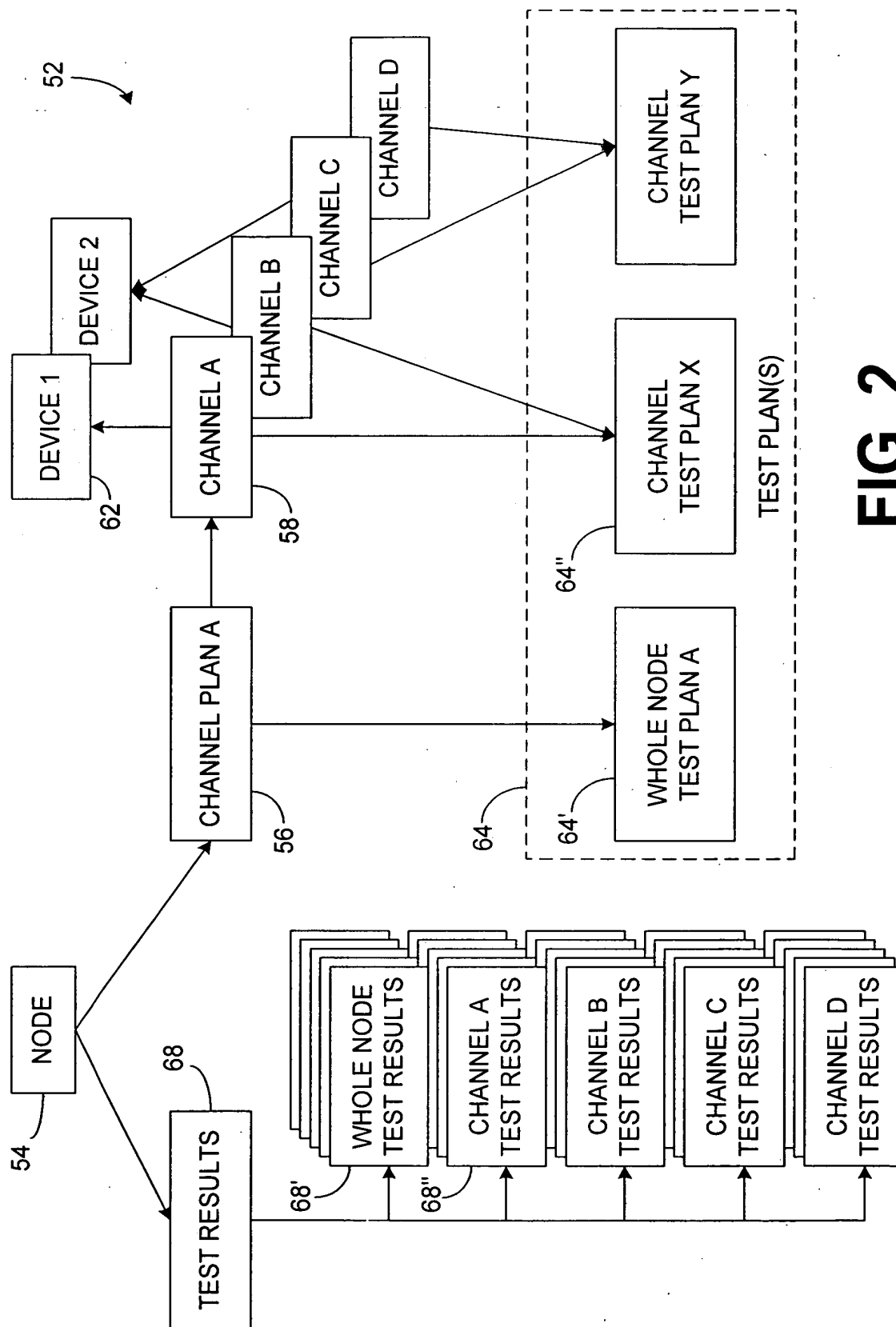


FIG. 2

CHANNEL PLAN

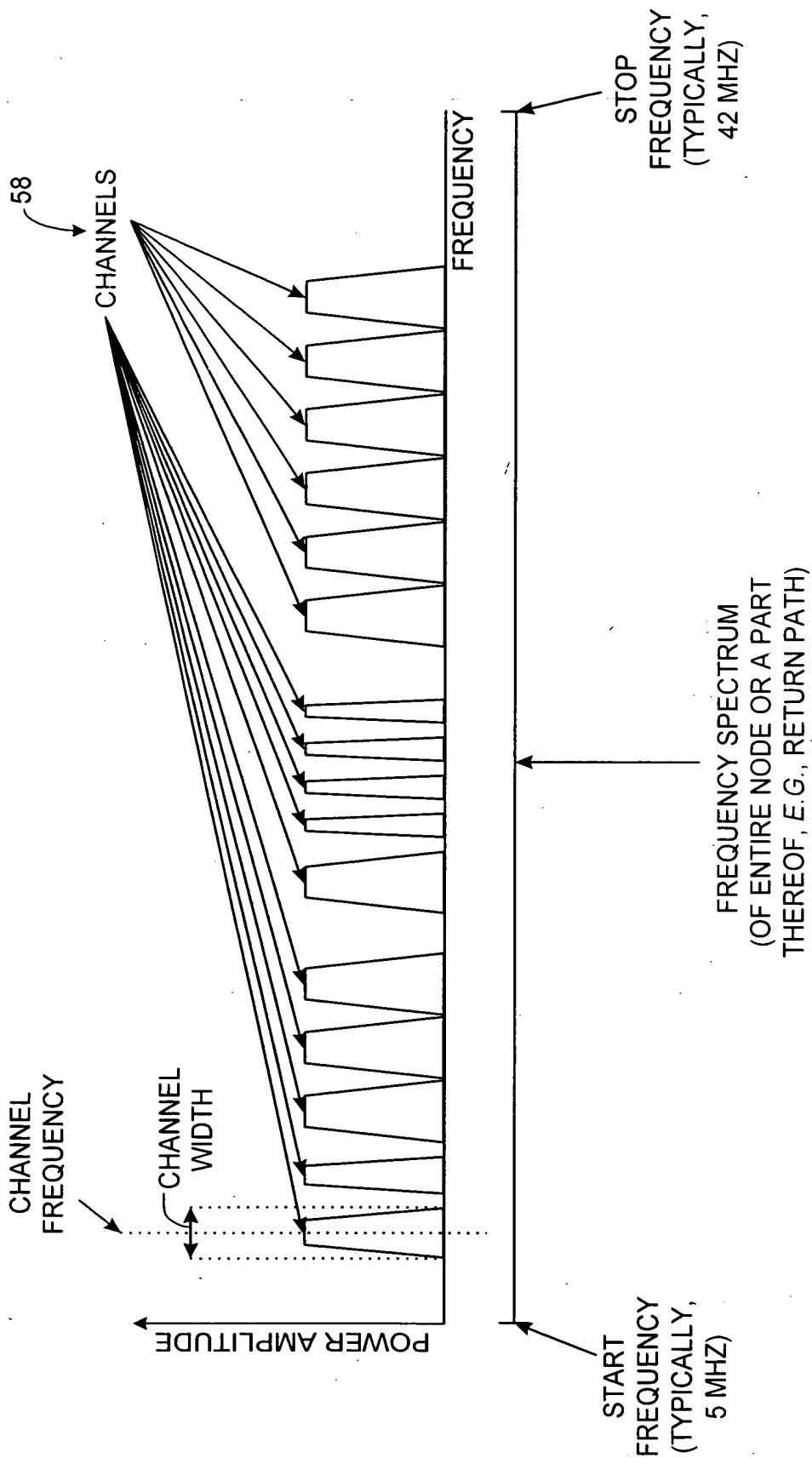
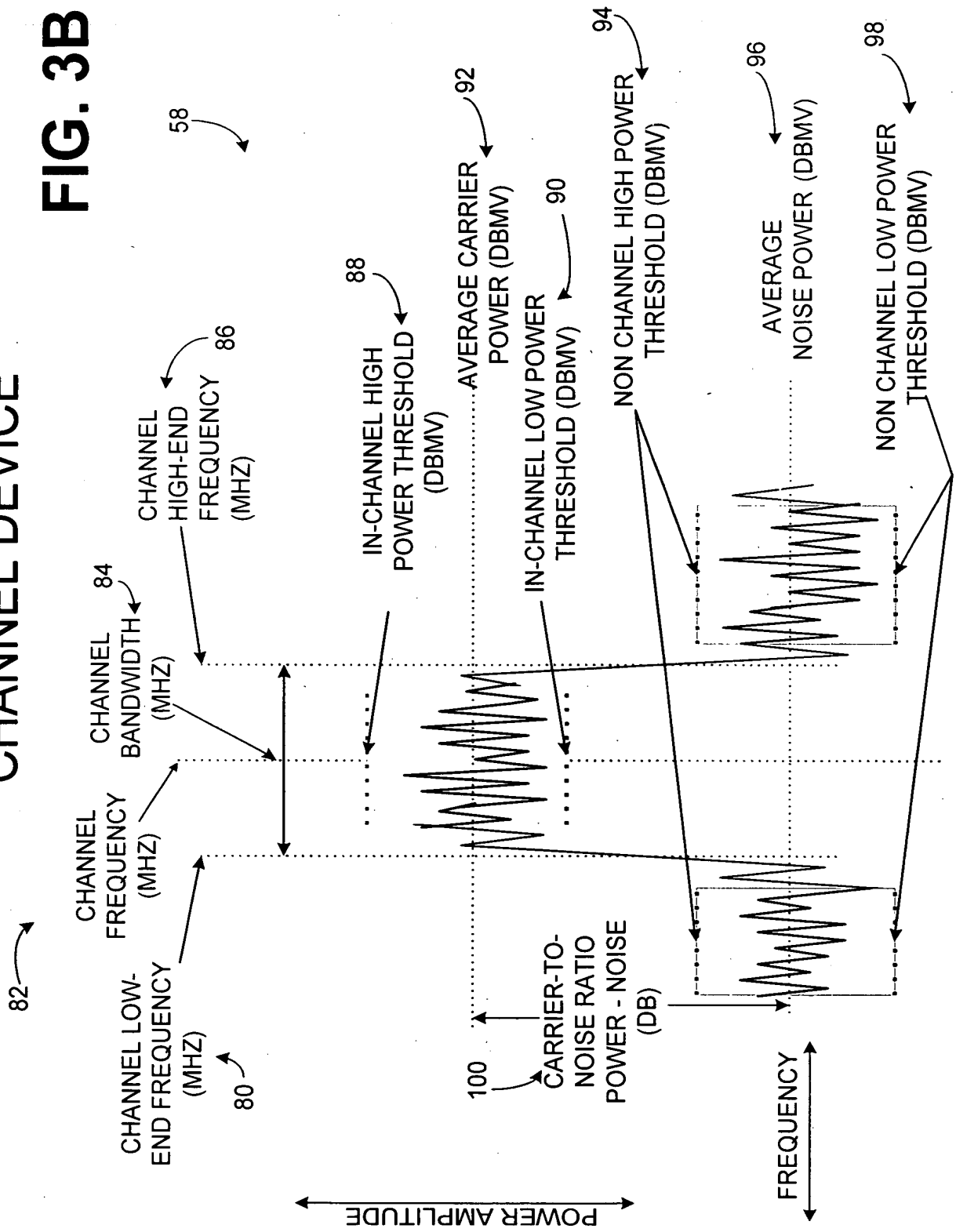


FIG. 3A

CHANNEL DEVICE

FIG. 3B



TEST PLAN

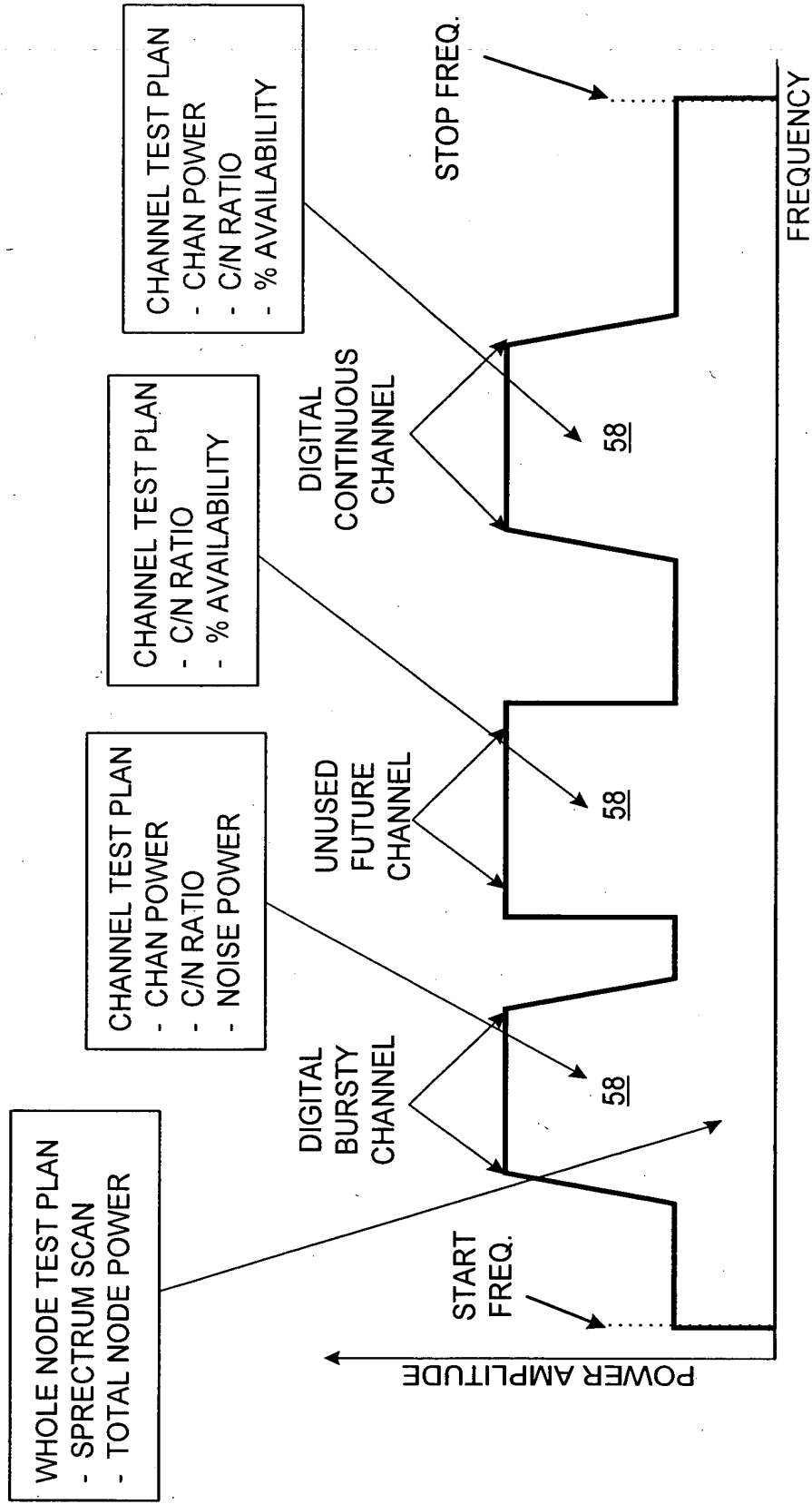


FIG. 3C

SPECTRUM SCAN TEST (WHOLE NODE)

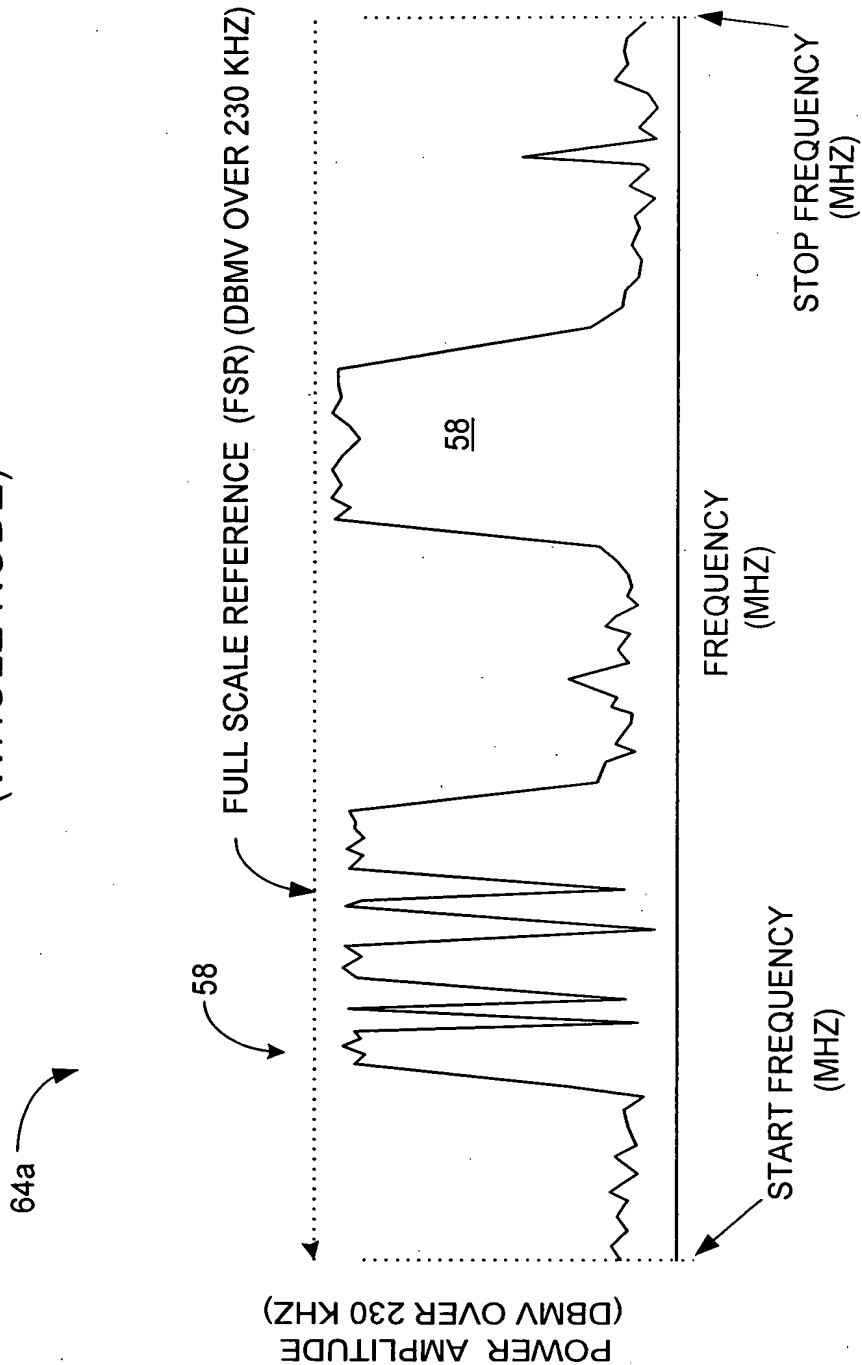


FIG. 3D

SPECTRUM SCAN TEST (ALARM LIMITS)

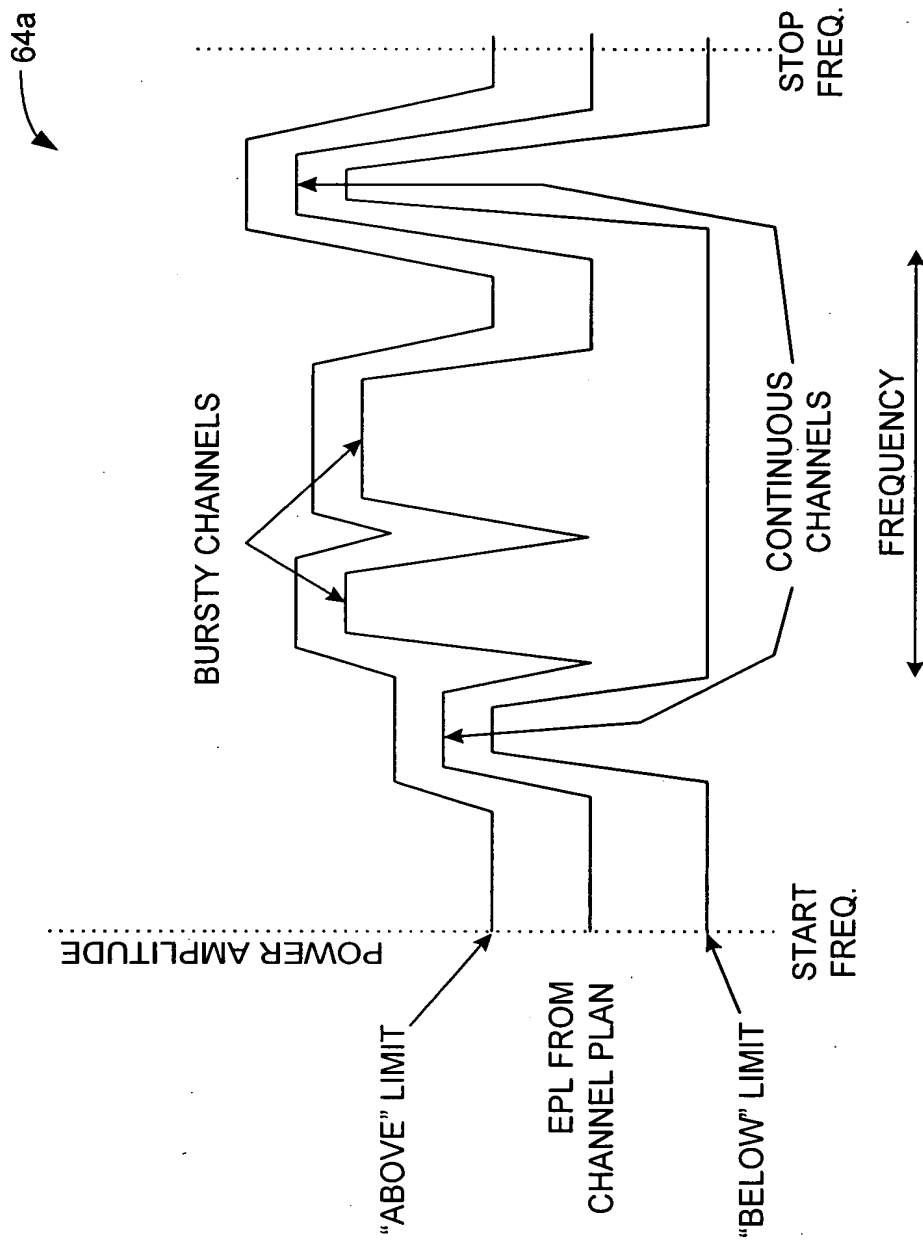


FIG. 3E

TOTAL NODE POWER TEST (WHOLE NODE)

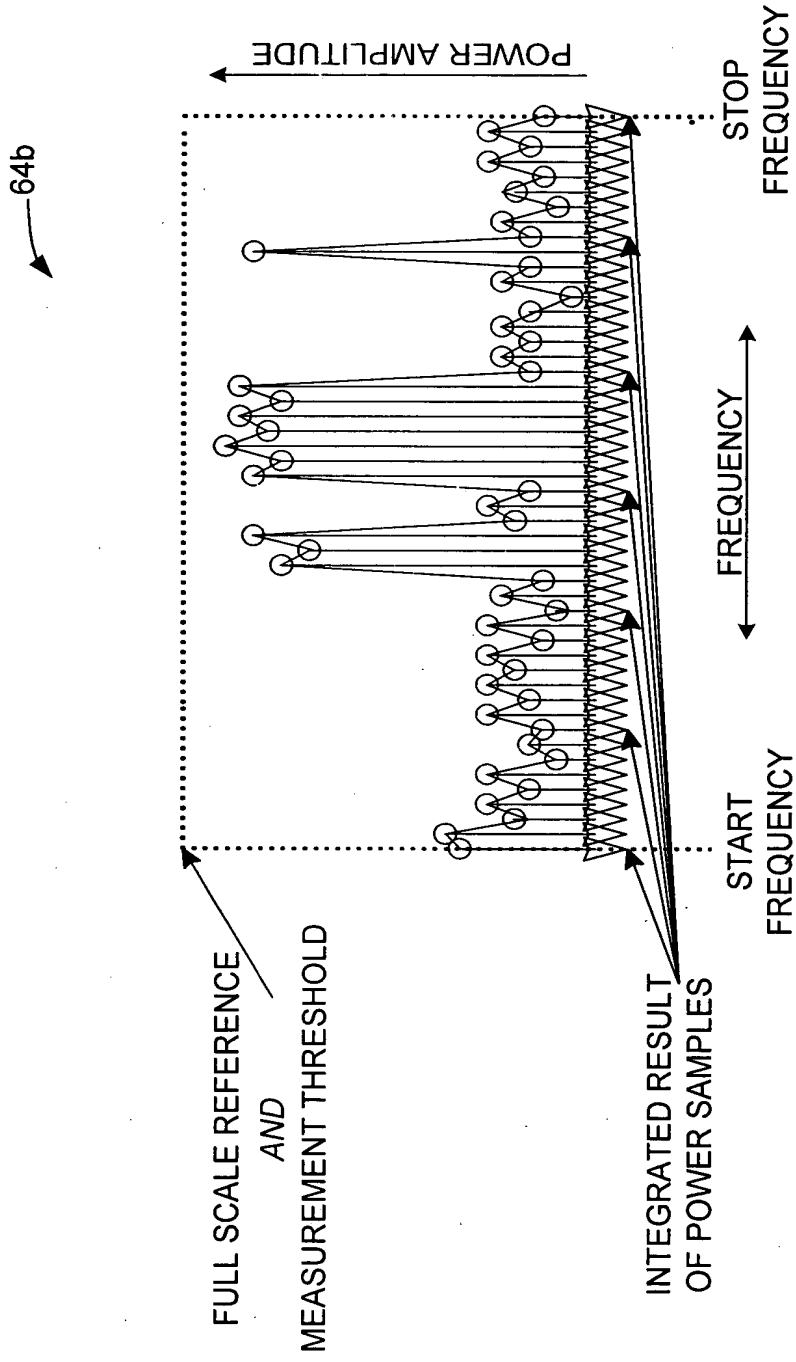


FIG. 3F

AVERAGE NOISE POWER TEST (CHANNEL)

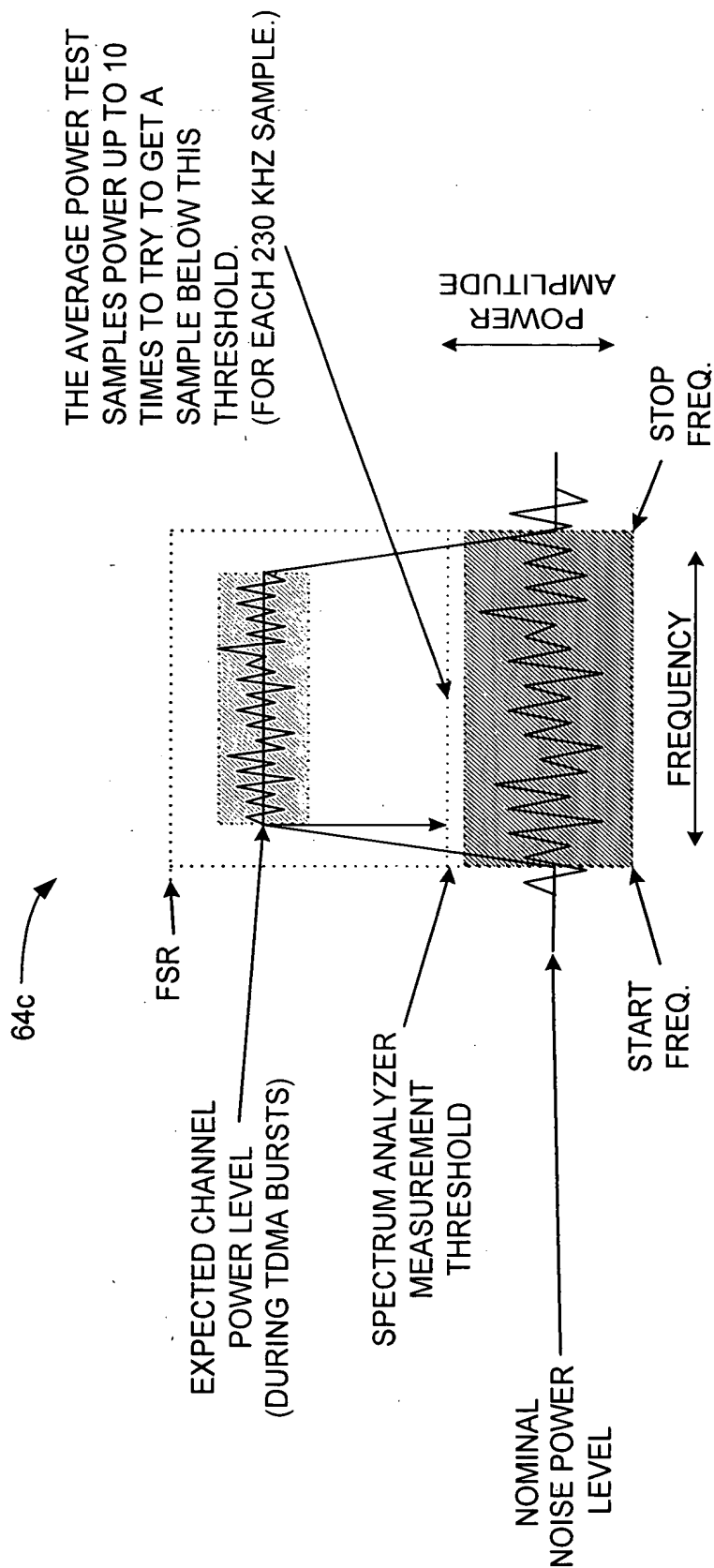


FIG. 3G

AVERAGE NOISE POWER TEST (ALARM LIMITS)

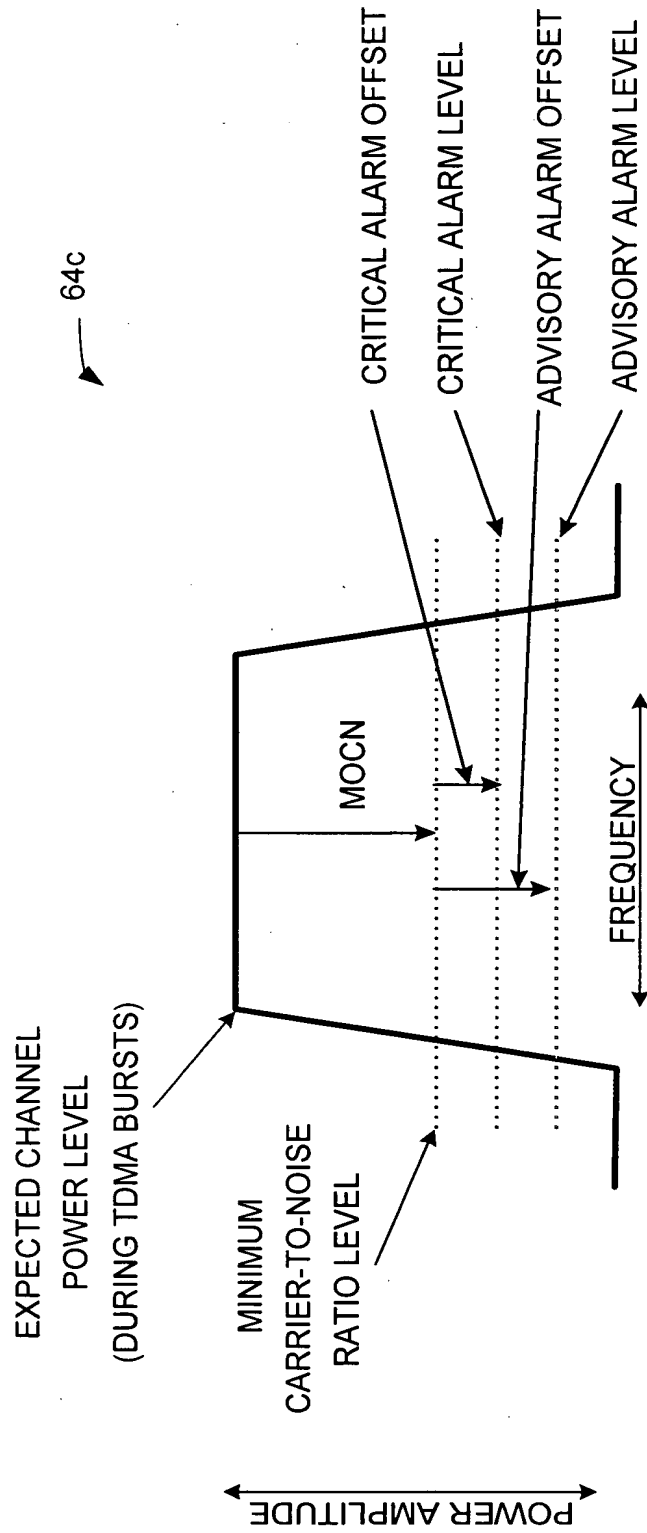


FIG. 3H

CHANNEL POWER TEST (CHANNEL)

64d

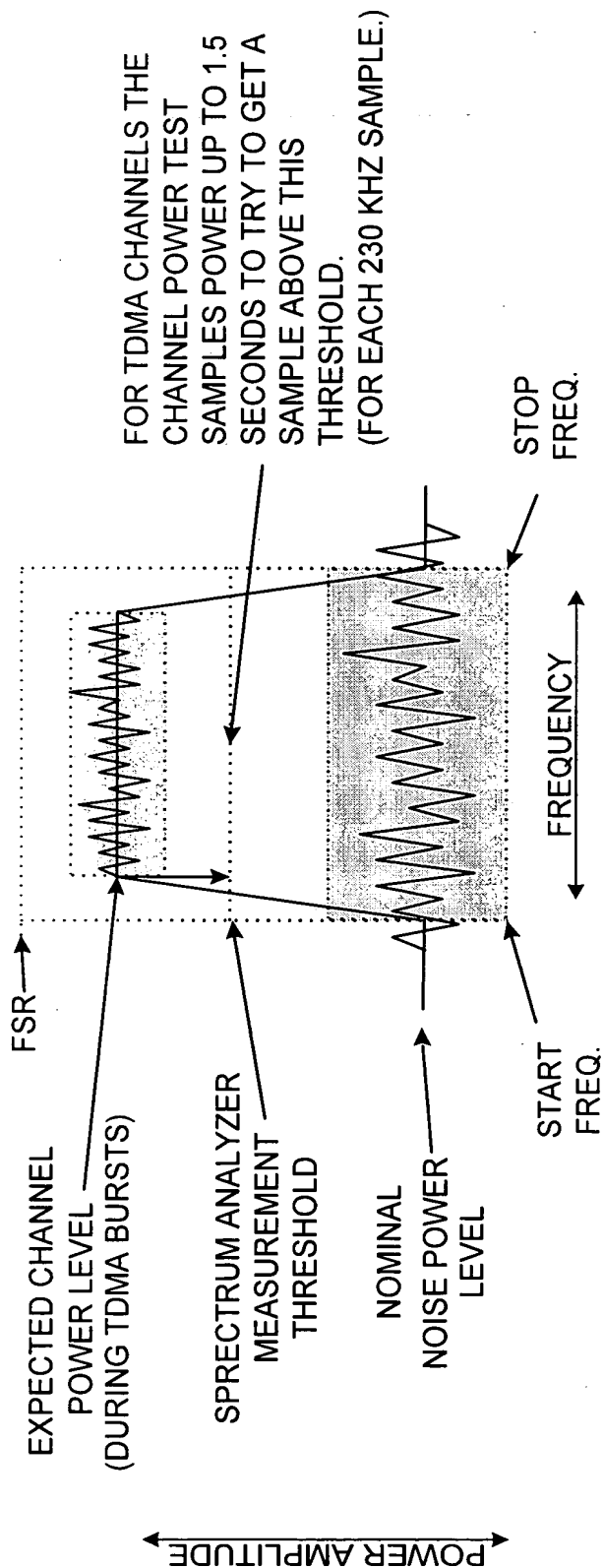


FIG. 31

CHANNEL POWER TEST (ALARM LIMITS)

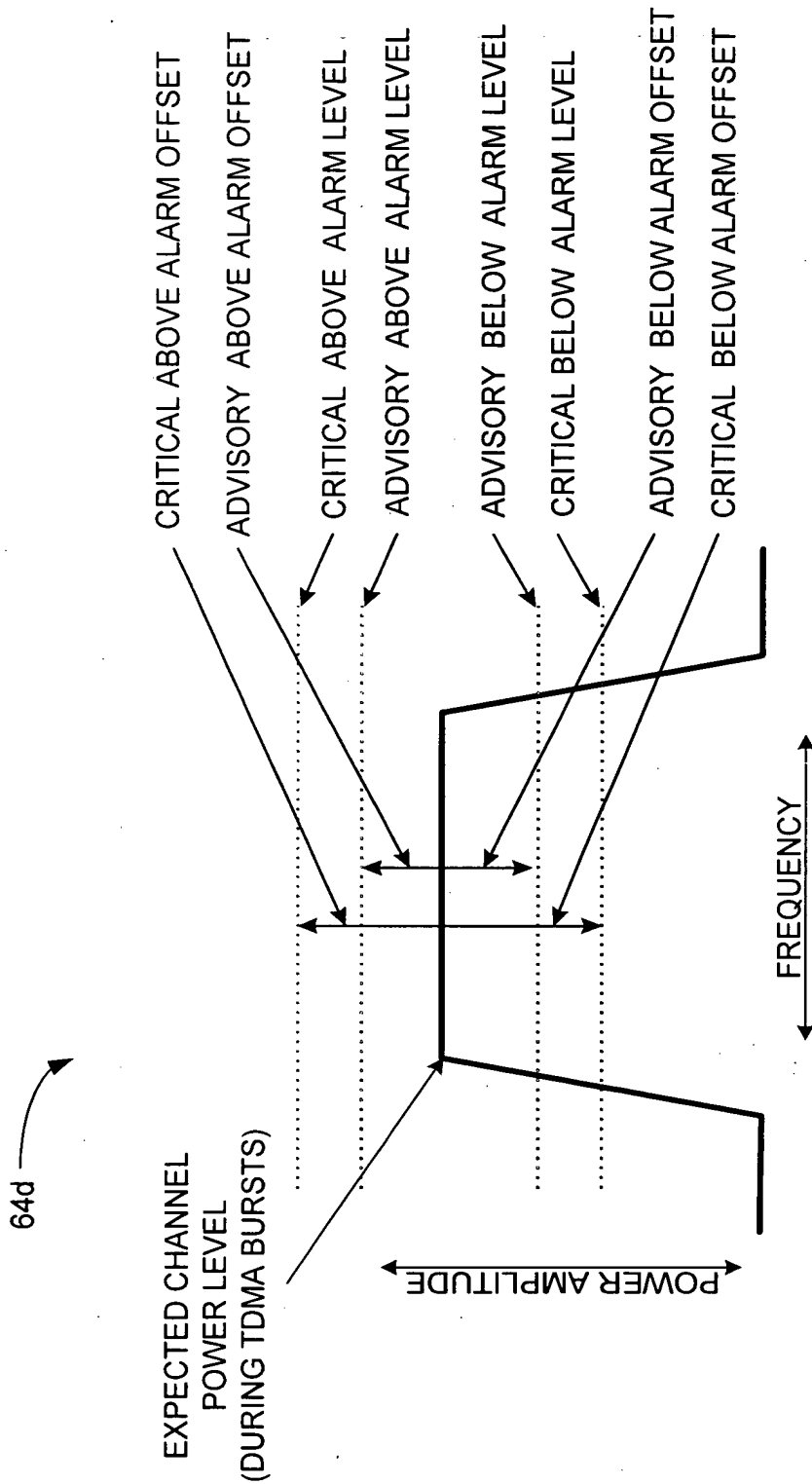


FIG. 3J

CHANNEL POWER TEST (TDMA BURSTS)

64d

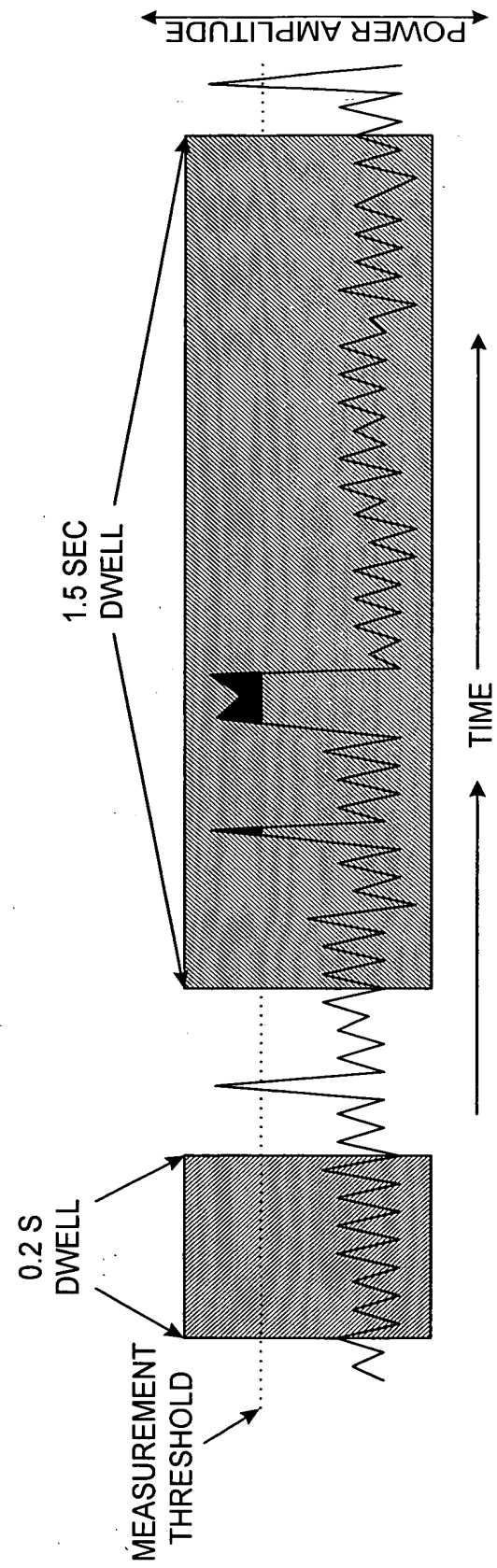


FIG. 3K

C/N TEST (CHANNEL)

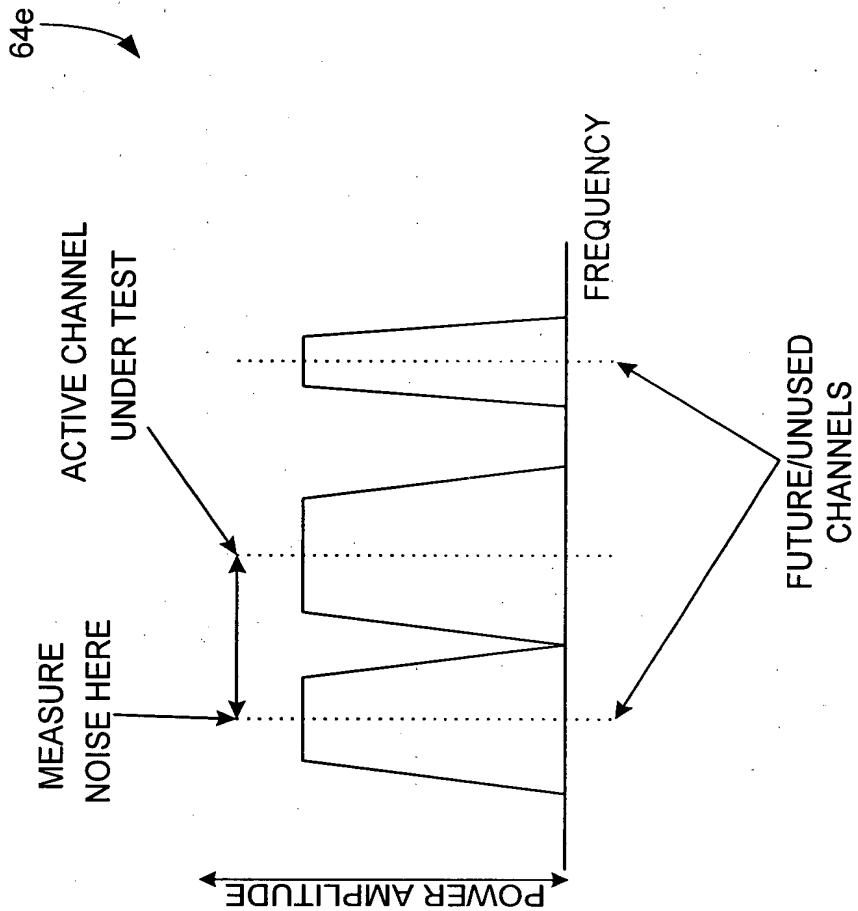


FIG. 3L

BURST COUNTER TEST (CHANNEL)

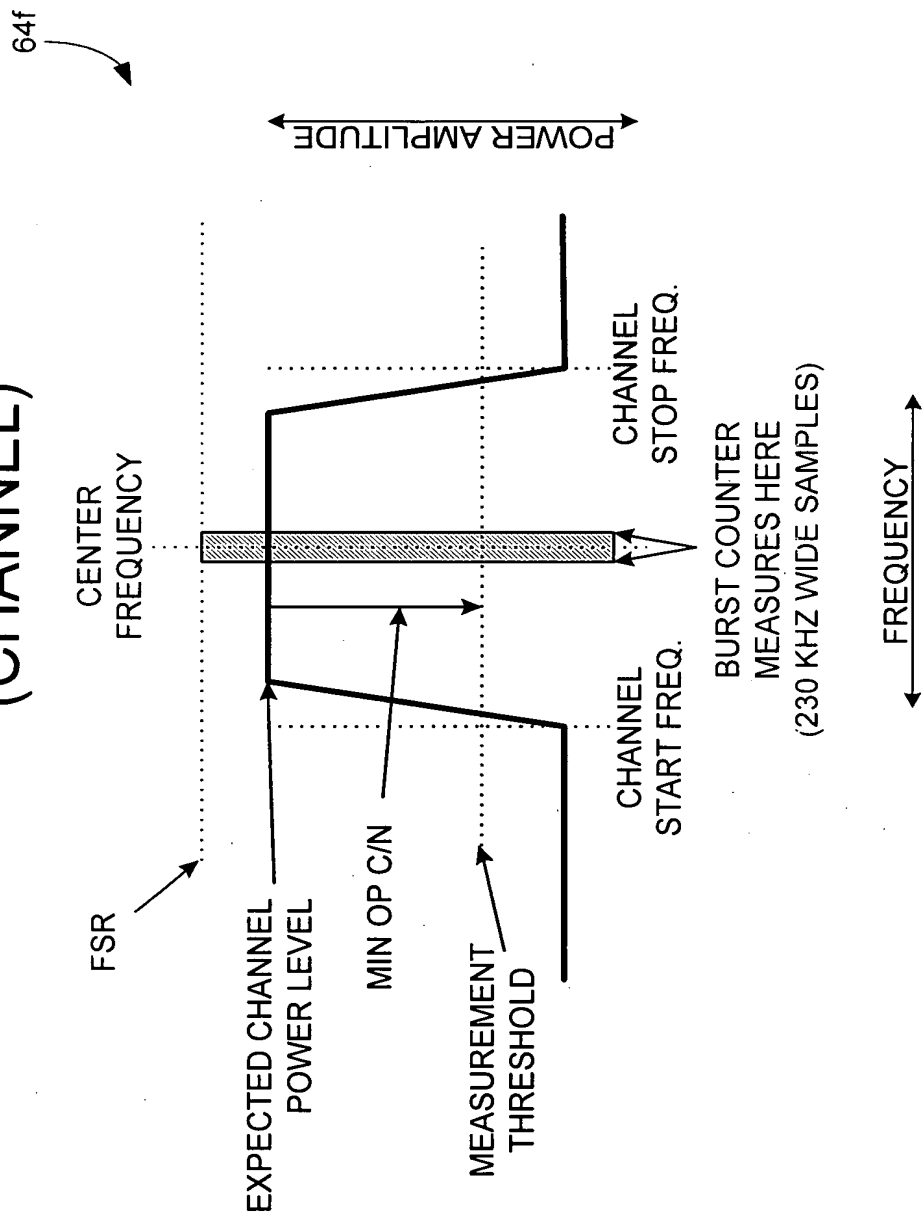


FIG. 3M

PERCENT AVAILABILITY TEST (CHANNEL)

64g

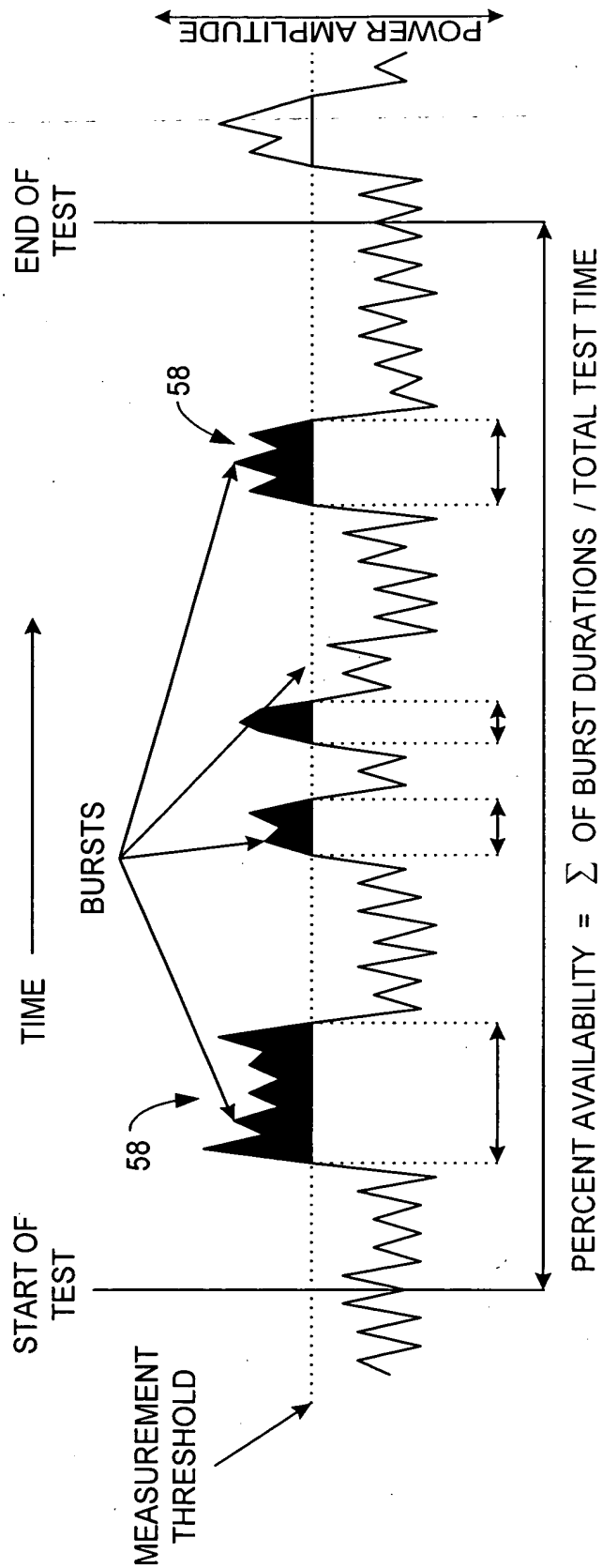


FIG. 3N

PERCENT AVAILABILITY TEST (ACTIVE CHANNELS)

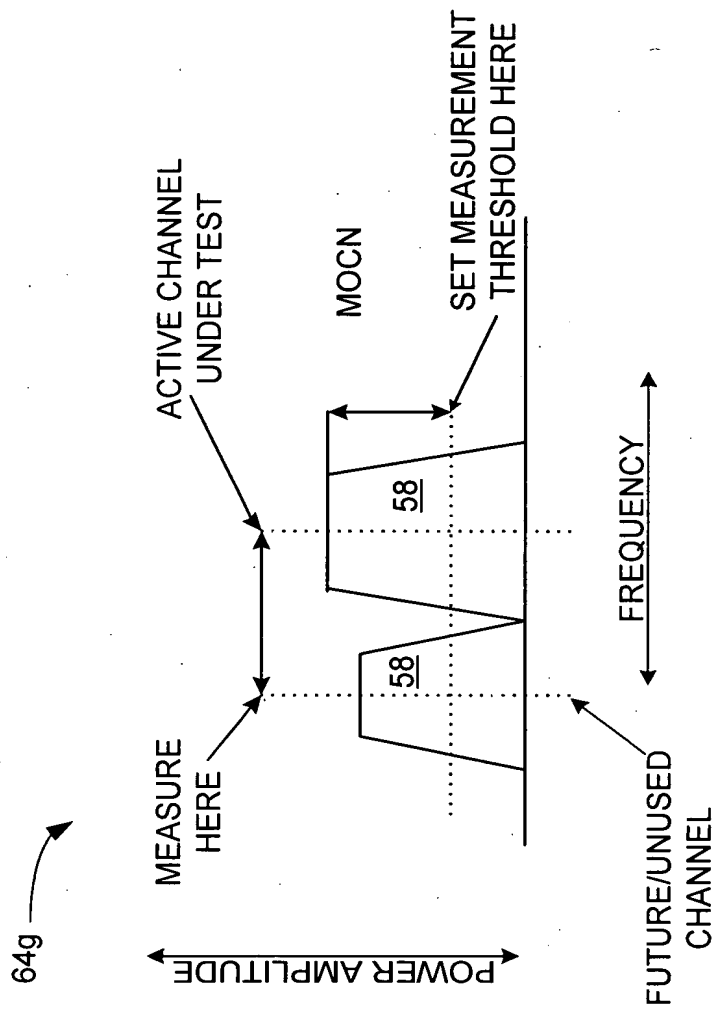


FIG. 30

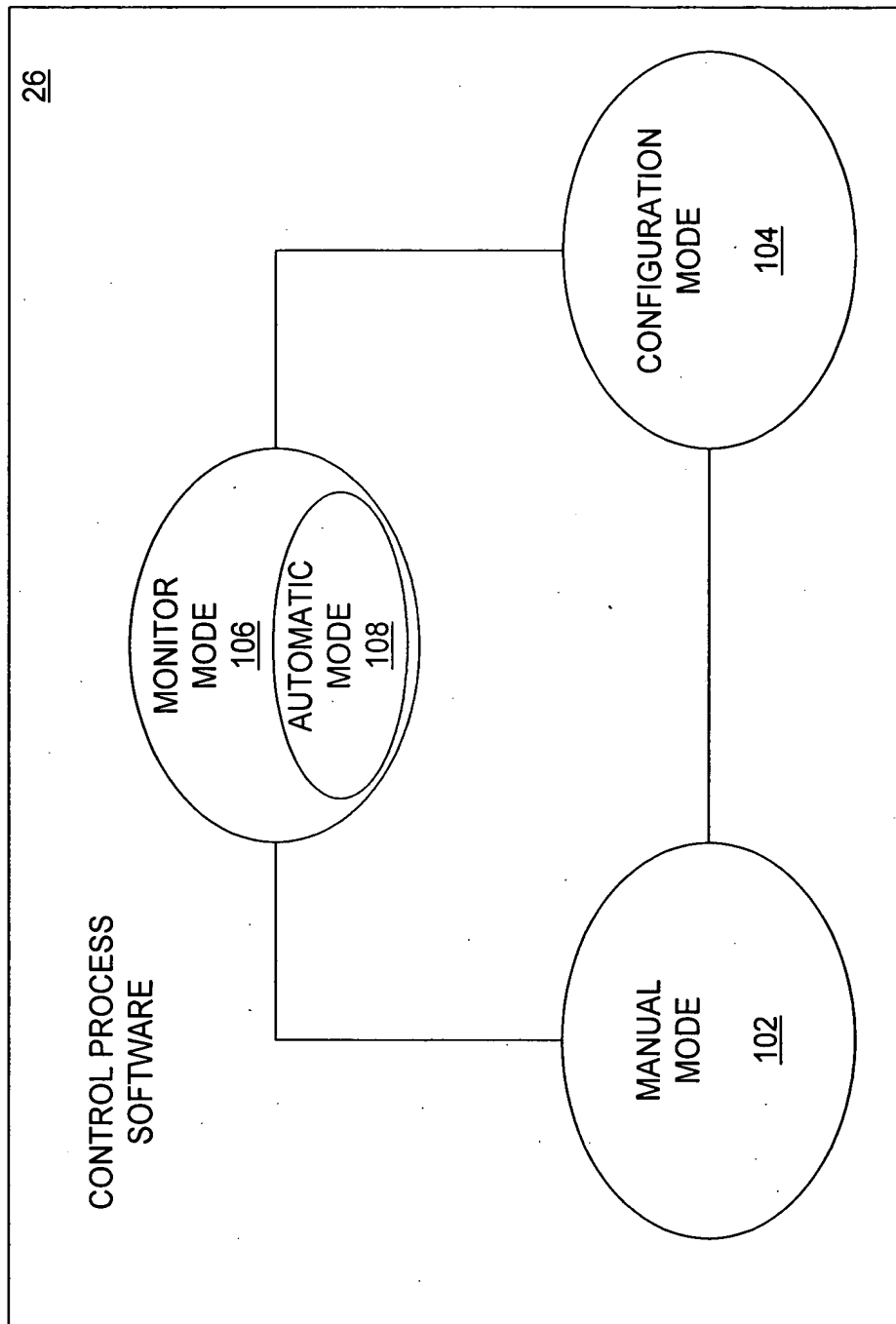
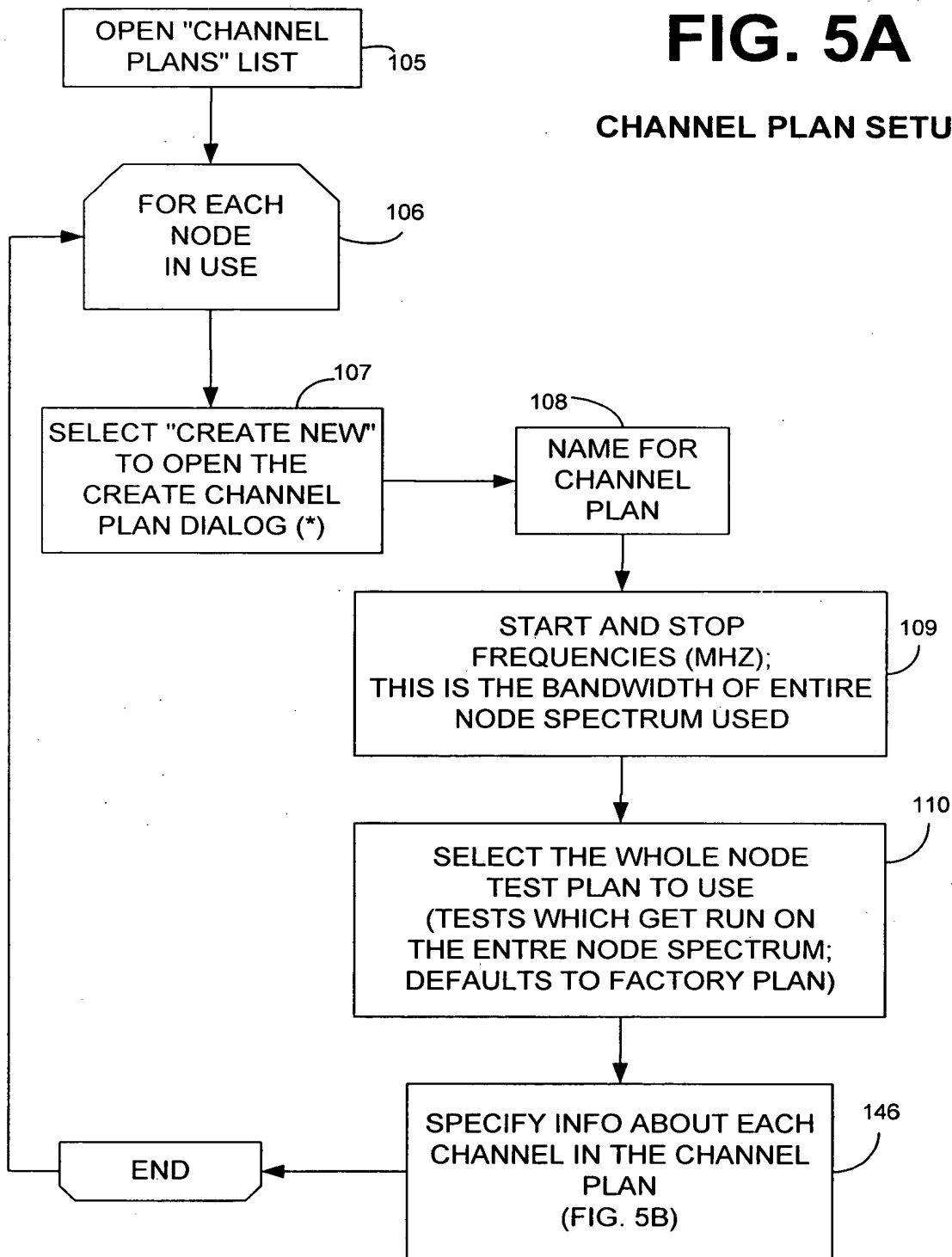


FIG. 4

FIG. 5A

CHANNEL PLAN SETUP



SPECIFY GENERAL INFO ABOUT CHANNEL PLAN

DO NOT REUSE

FIG. 5B

CHANNEL PLAN SETUP (CONTINUED)

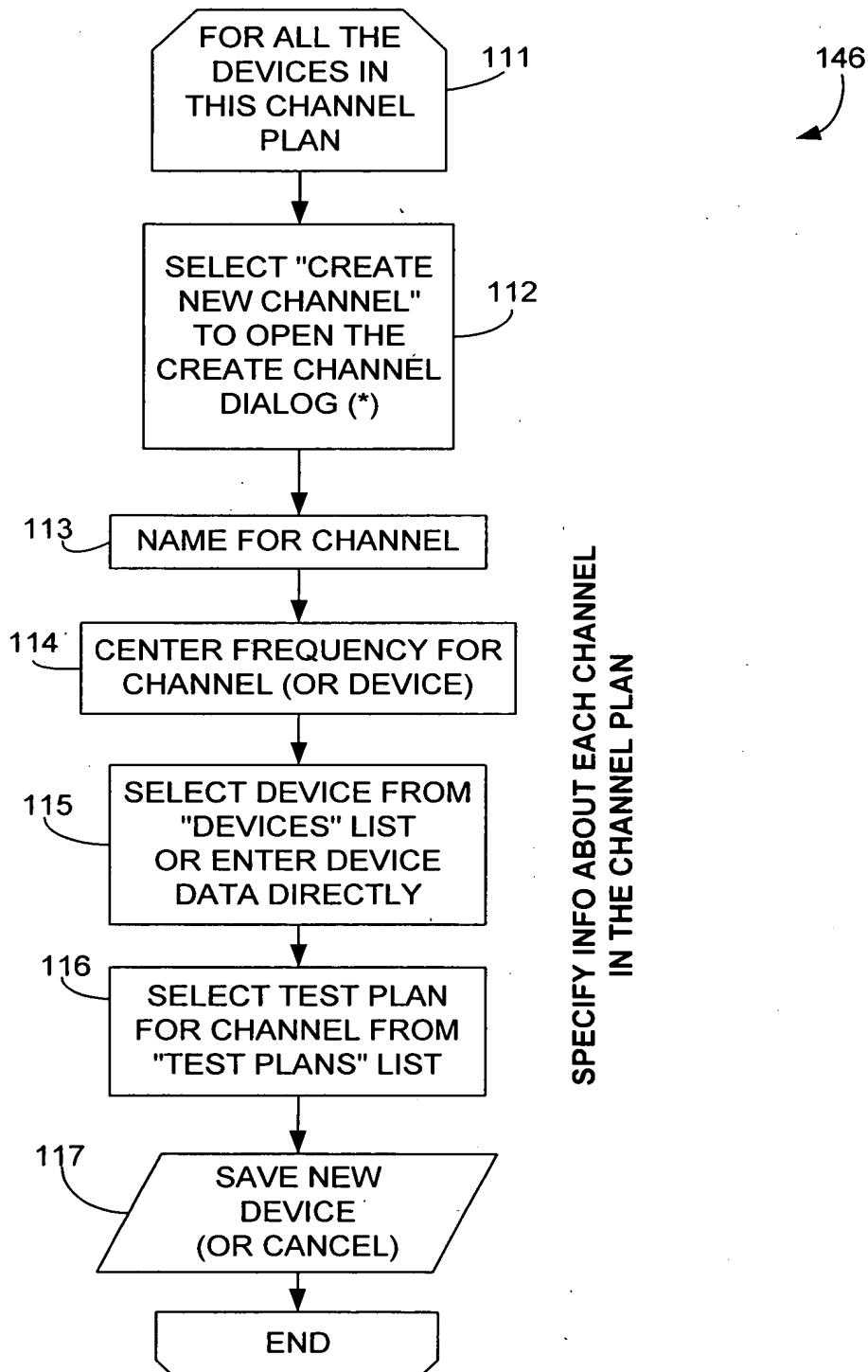
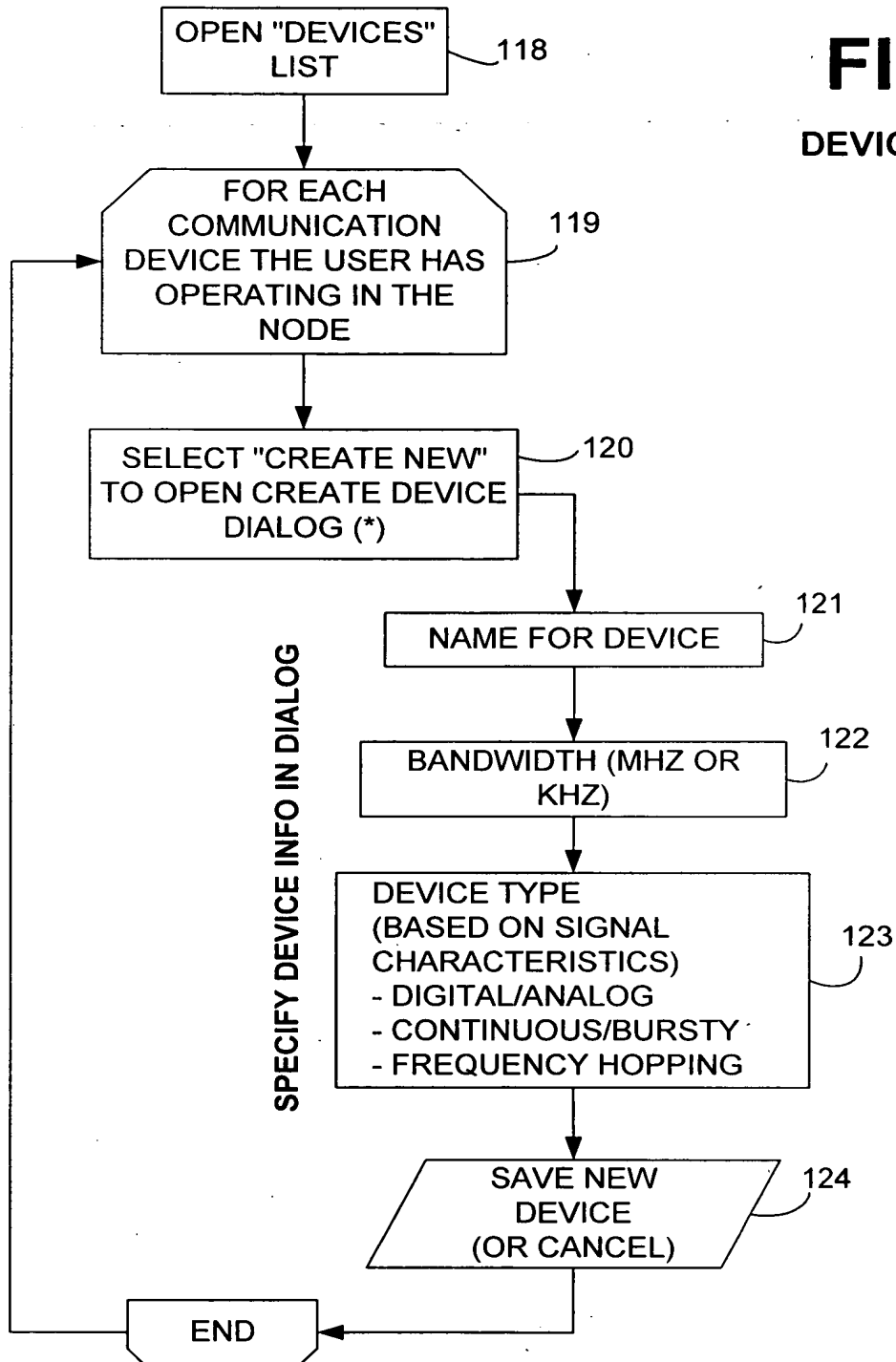


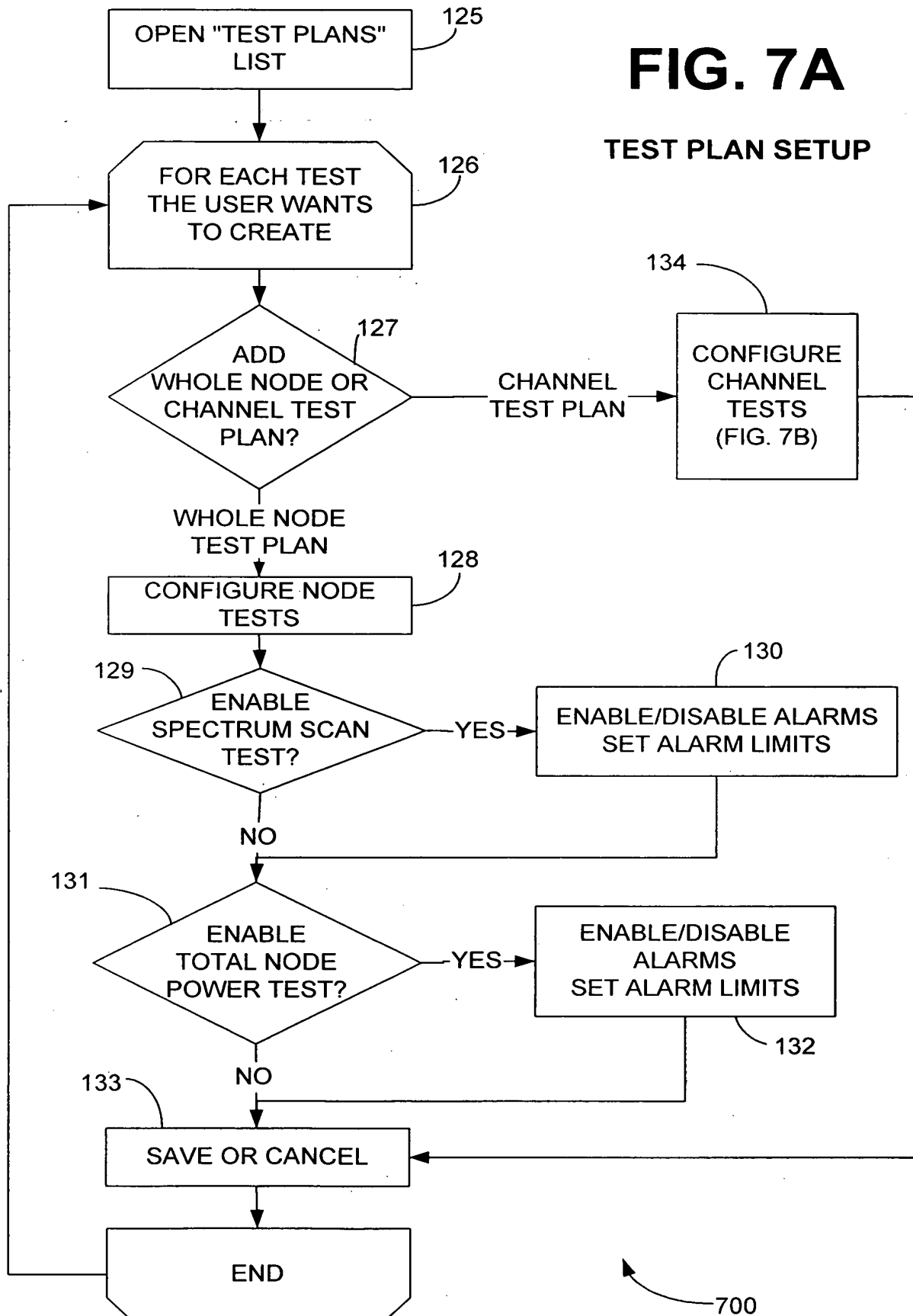
FIG. 6
DEVICE SETUP



* NOTE: DEVICE LIST DIALOG ALSO
ALLOWS USER TO EDIT OR DELETE
DEVICES.

FIG. 7A

TEST PLAN SETUP



TEST PLAN SETUP (CONTINUED)

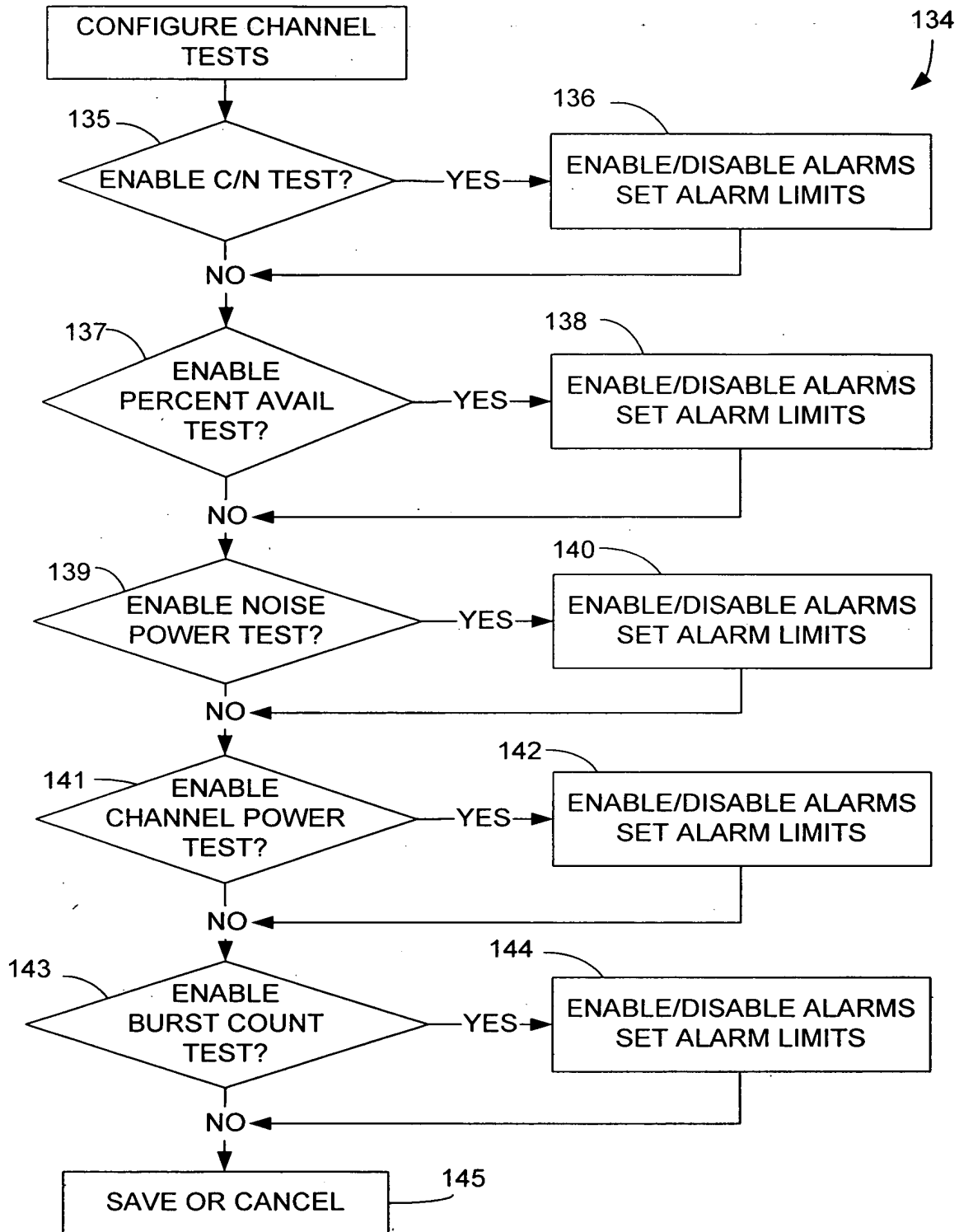
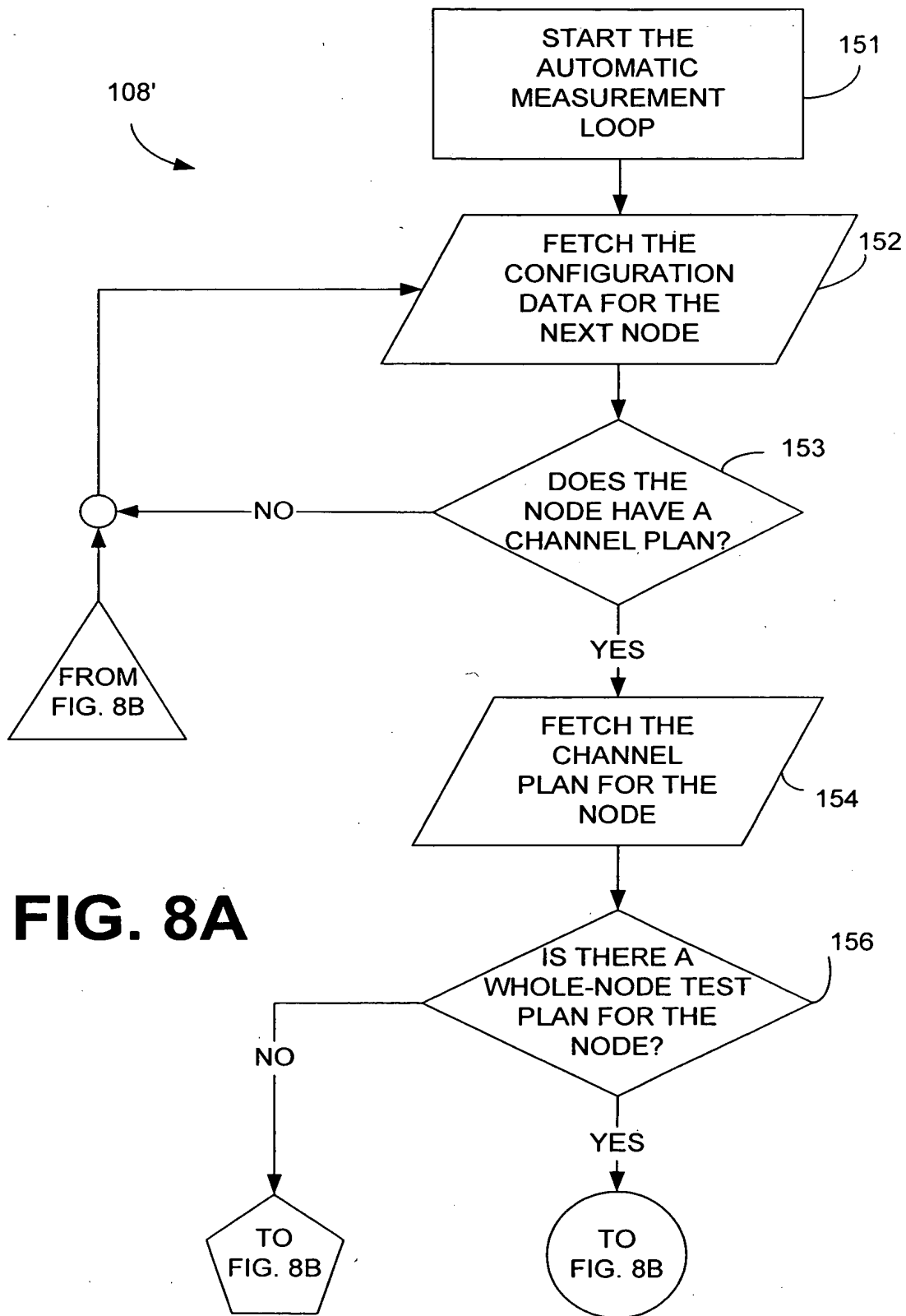


FIG. 7B

**AUTOMATIC MODE
(FIRST EMBODIMENT; EMPLOYS ROUND ROBIN ALGORITHM)**



[illegible]

**AUTOMATIC MODE
(FIRST EMBODIMENT - CONTINUED)**

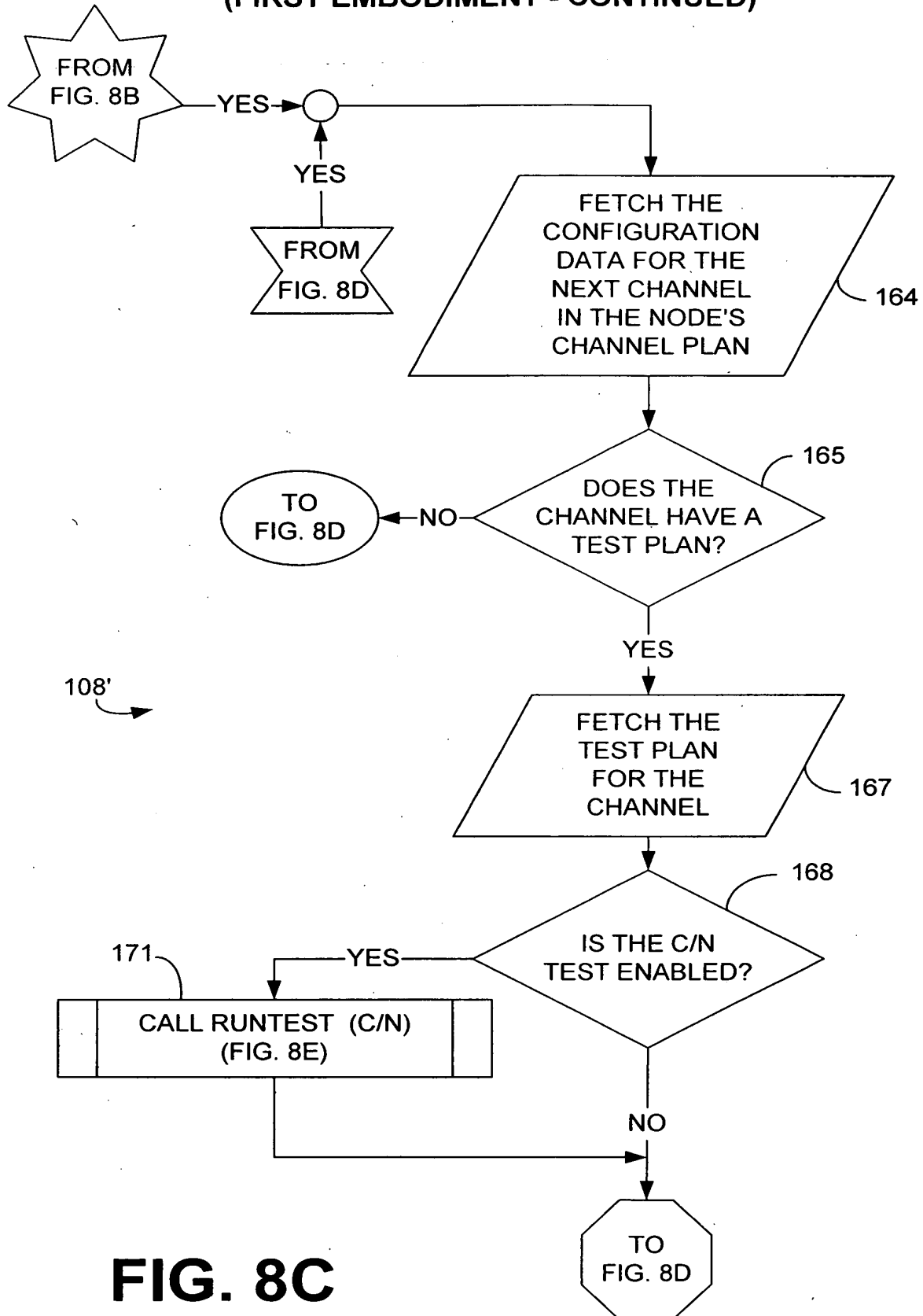
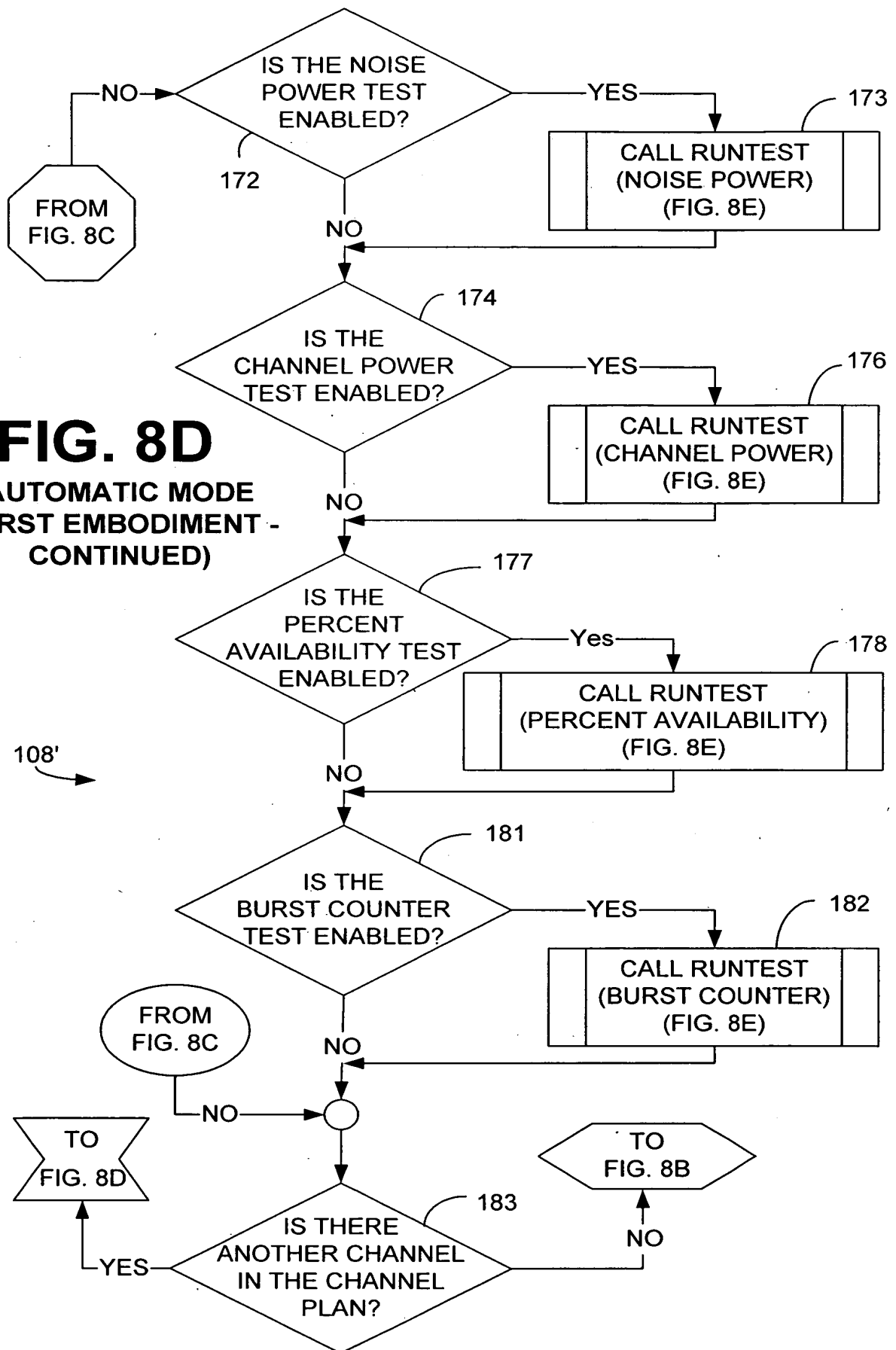


FIG. 8C

FIG. 8D
AUTOMATIC MODE
(FIRST EMBODIMENT -
CONTINUED)



**AUTOMATIC MODE
(FIRST EMBODIMENT - CONTINUED)**

RUNTEST SUBROUTINE

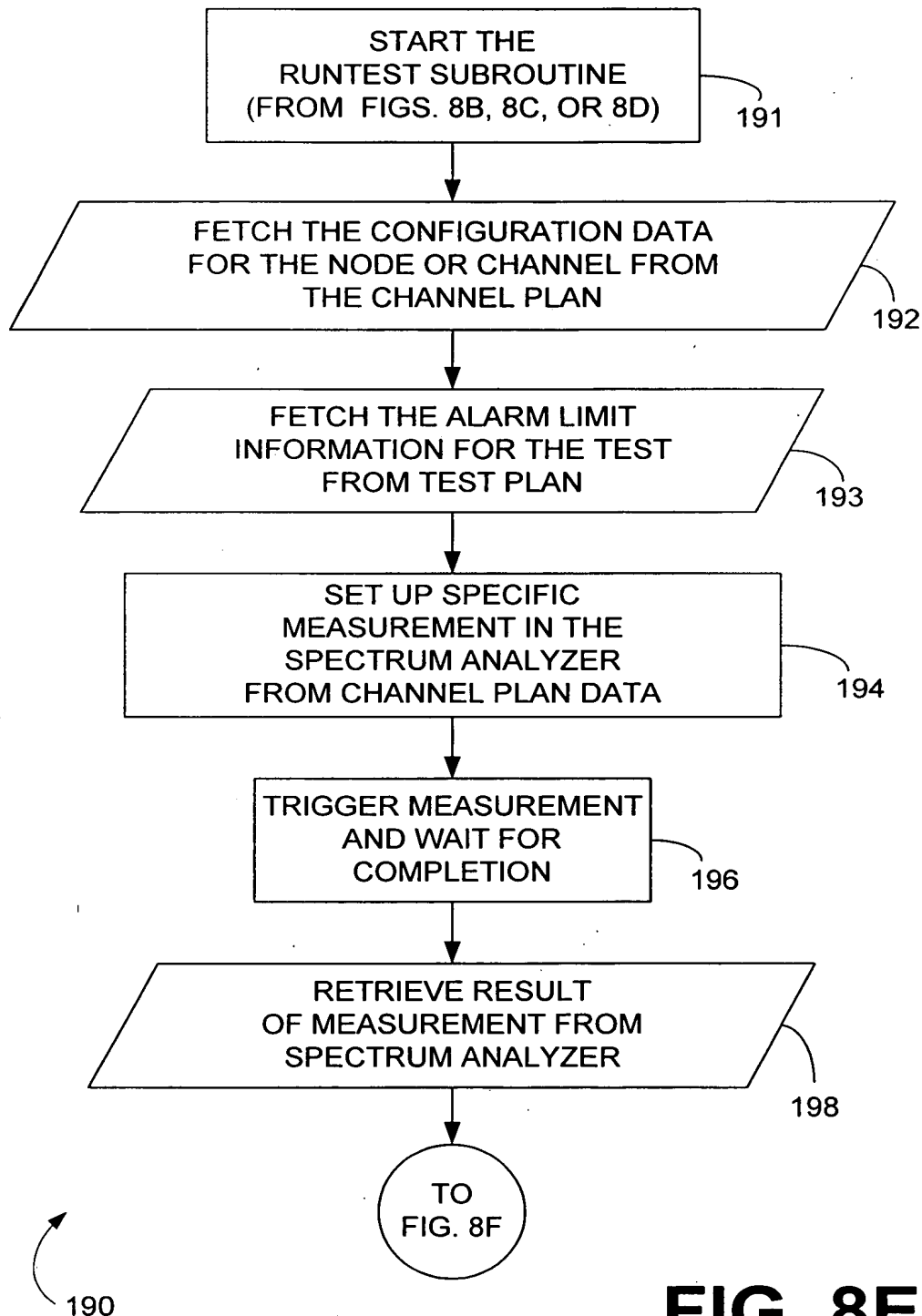


FIG. 8E

**AUTOMATIC MODE
(FIRST EMBODIMENT - CONTINUED)**

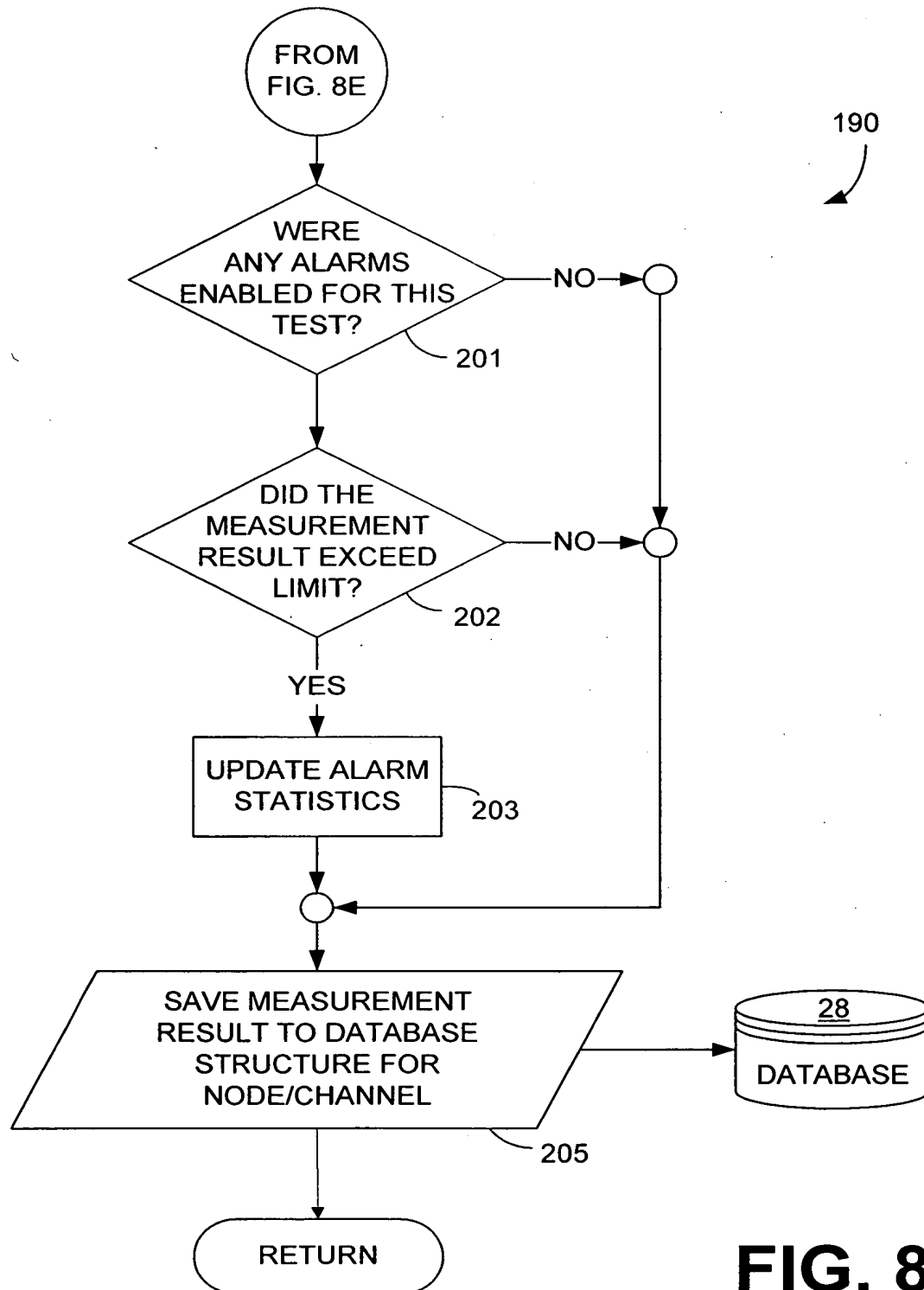


FIG. 8F

**AUTOMATIC MODE
(SECOND EMBODIMENT; EMPLOYS SMART
SCANNING ALGORITHM)**

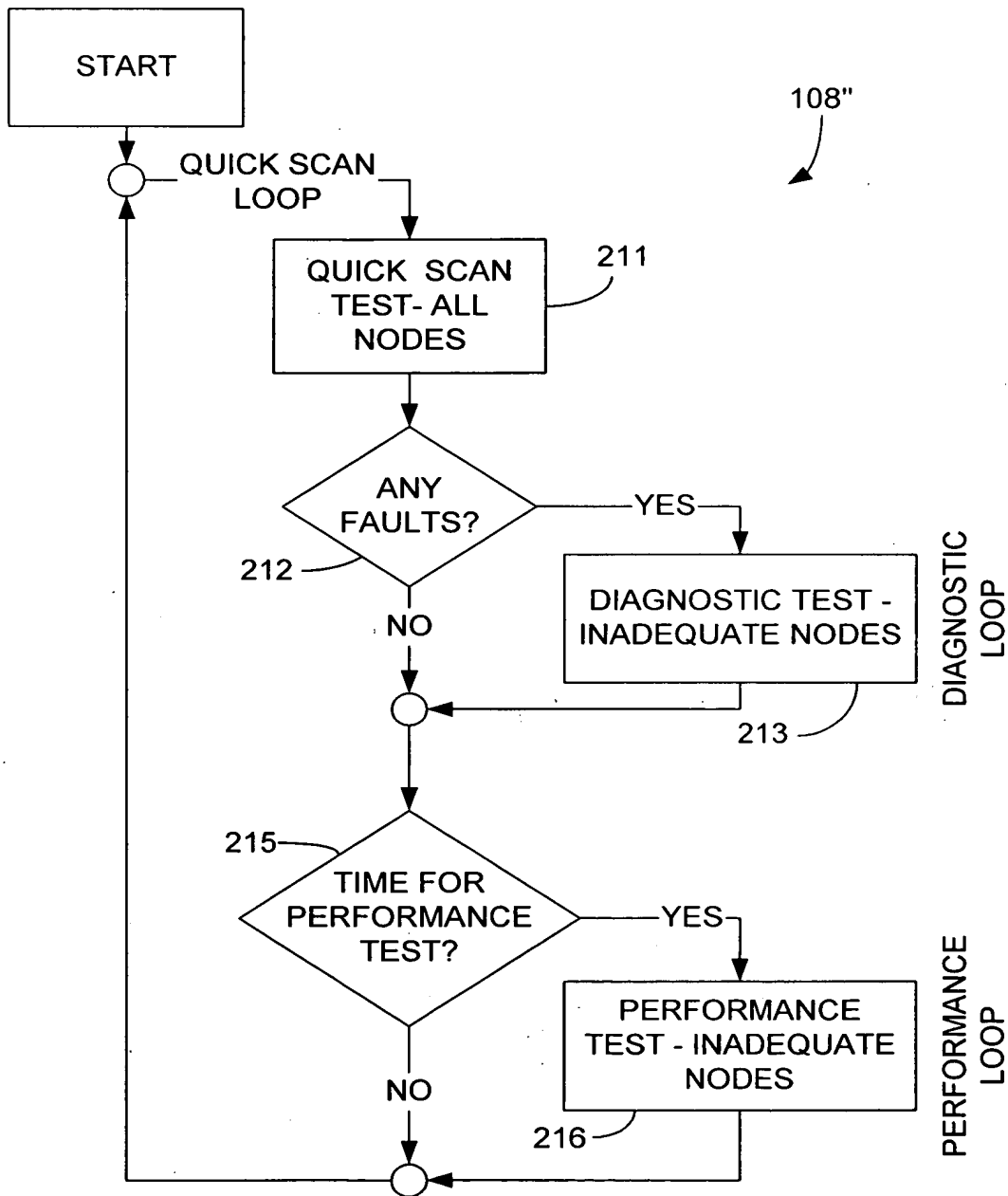


FIG. 9A

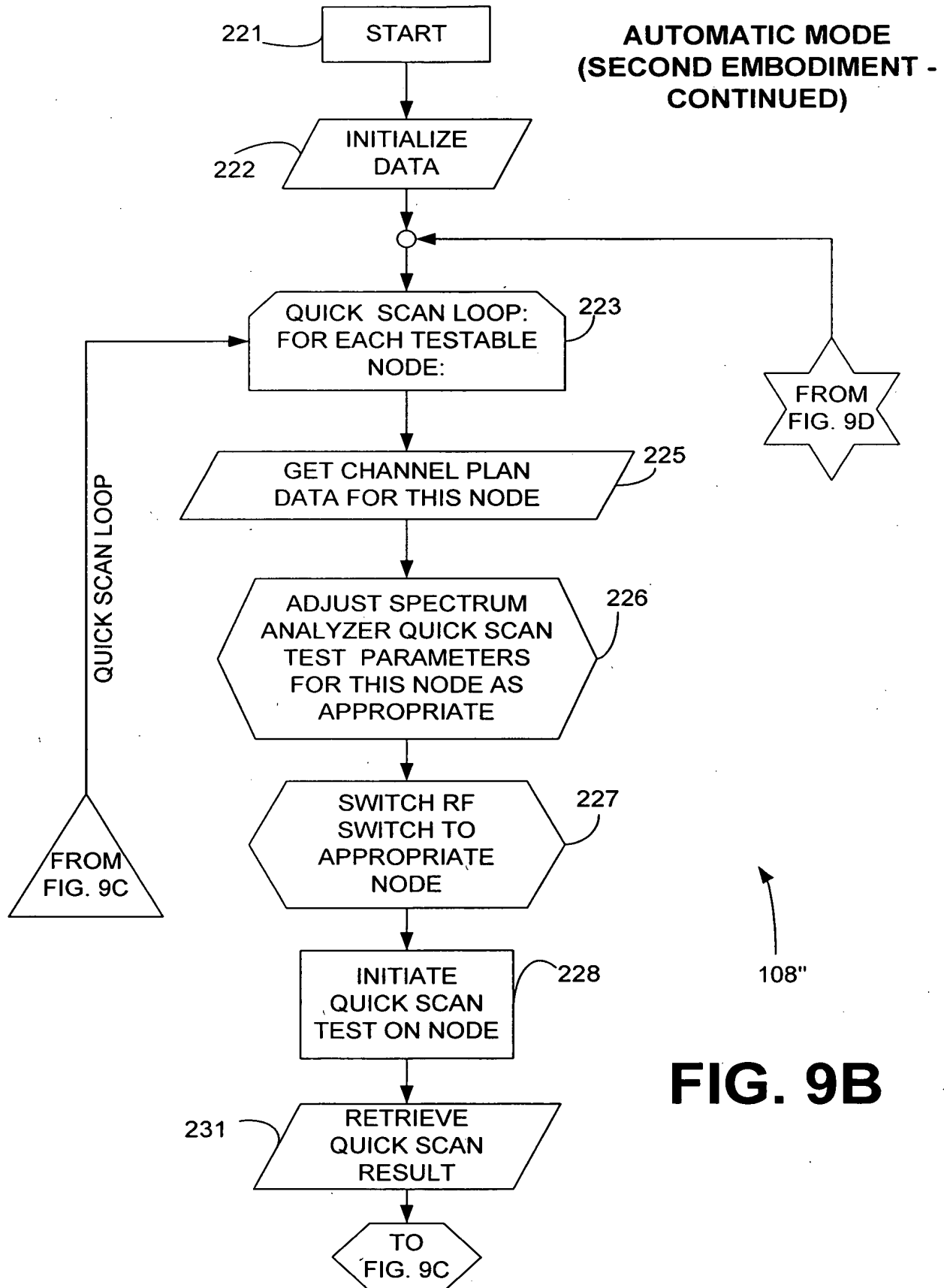


FIG. 9B

**AUTOMATIC MODE
(SECOND EMBODIMENT - CONTINUED)**

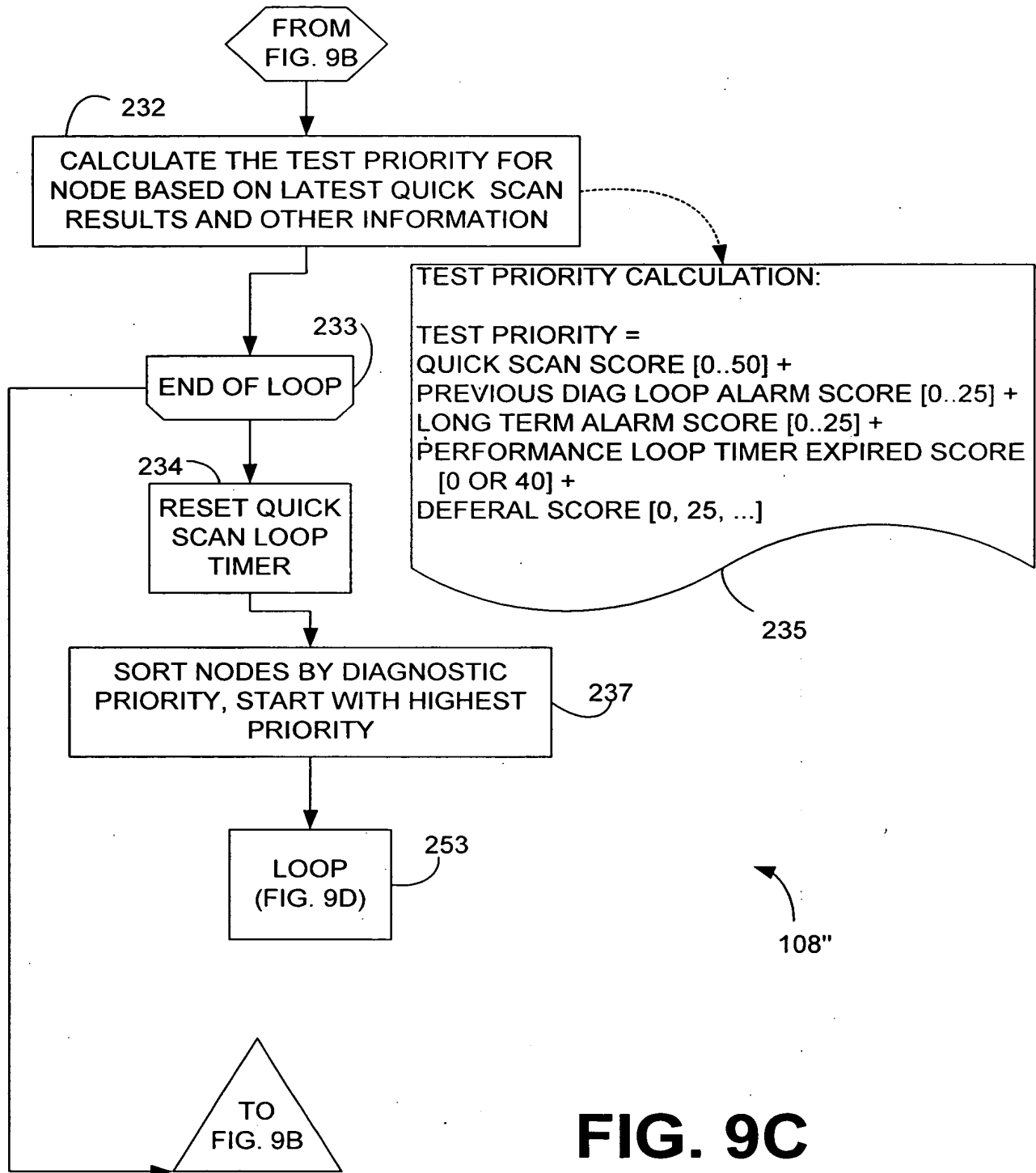
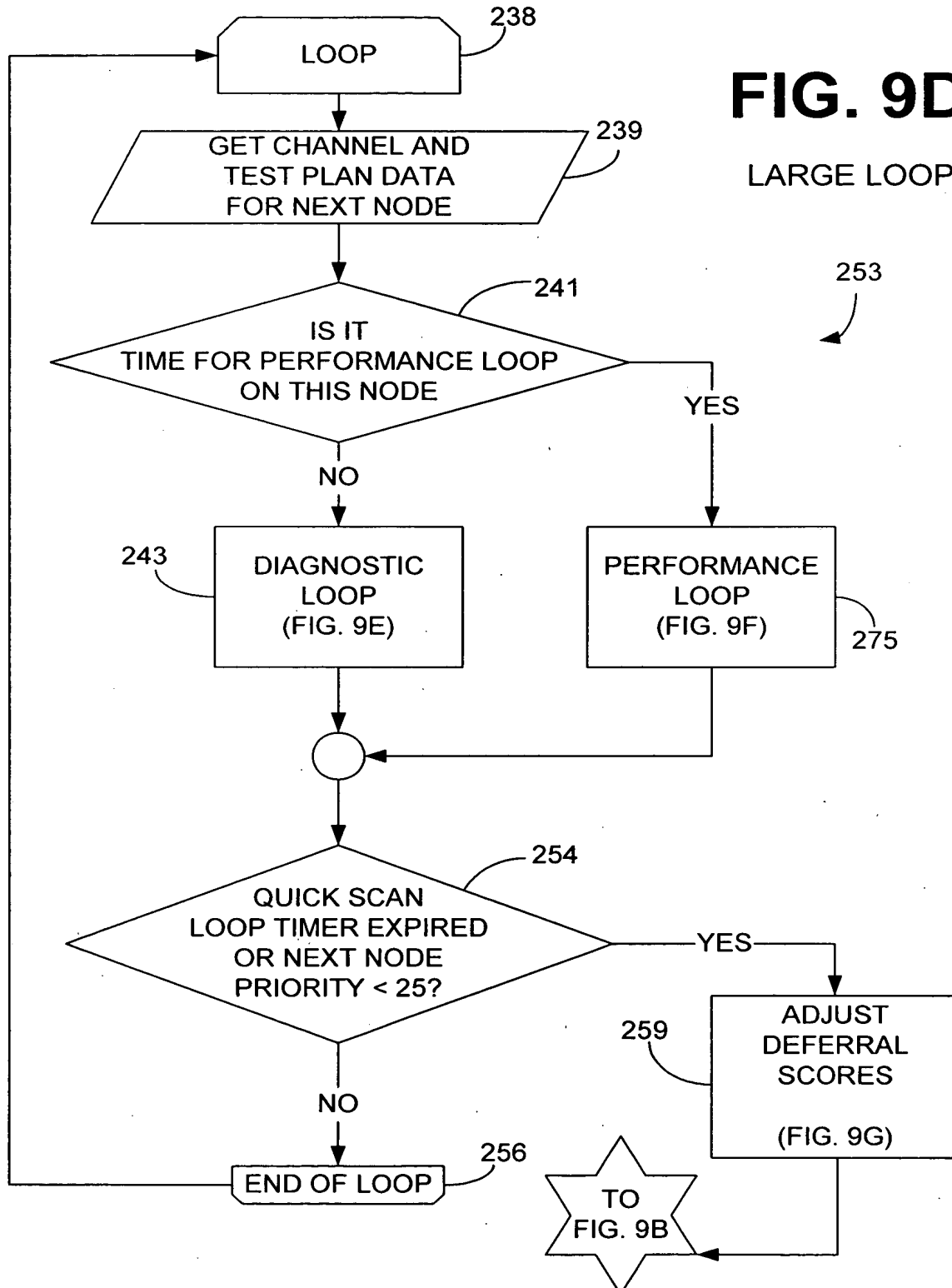


FIG. 9C

**AUTOMATIC MODE
(SECOND EMBODIMENT - CONTINUED)**

FIG. 9D

LARGE LOOP



**AUTOMATIC MODE
(SECOND EMBODIMENT - CONTINUED)**

DIAGNOSTIC LOOP

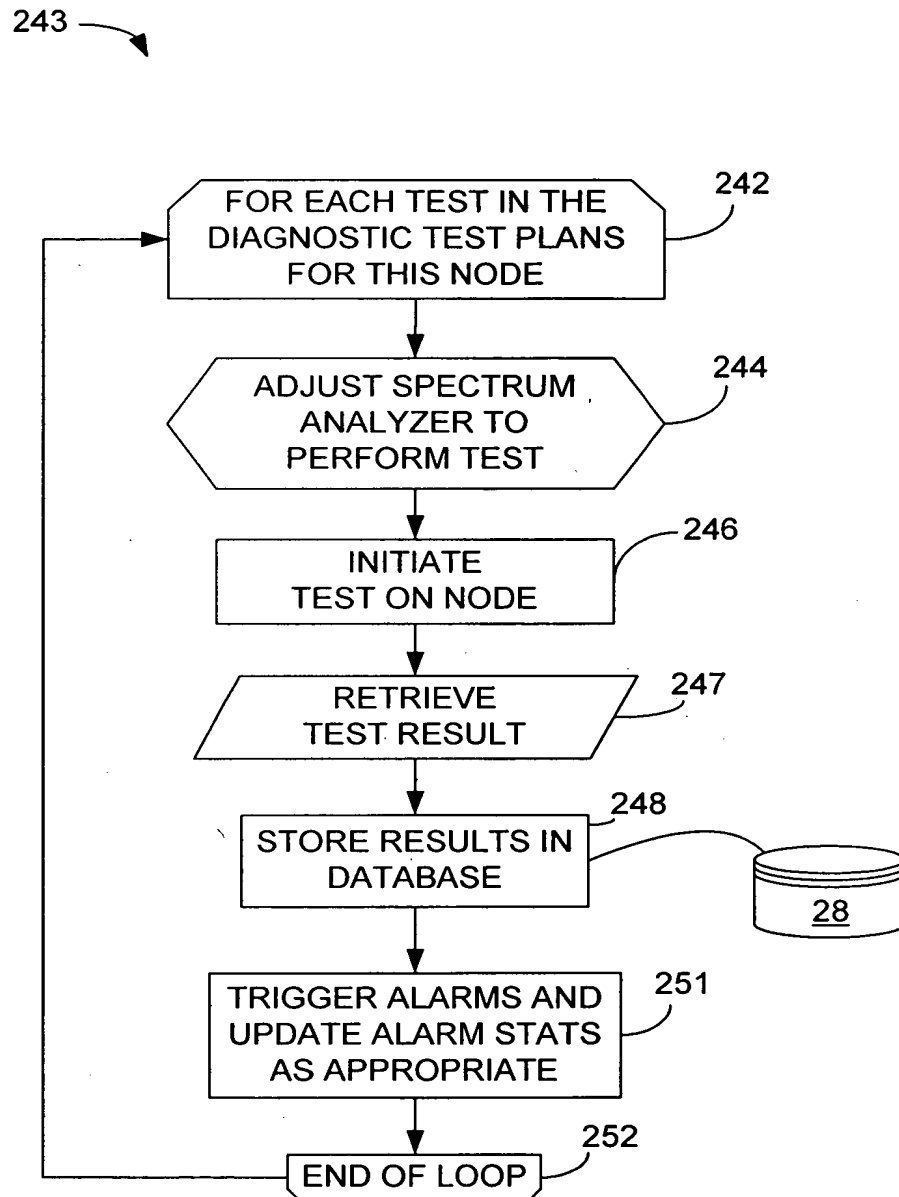


FIG. 9E

**AUTOMATIC MODE
(SECOND EMBODIMENT - CONTINUED)**

PERFORMANCE LOOP

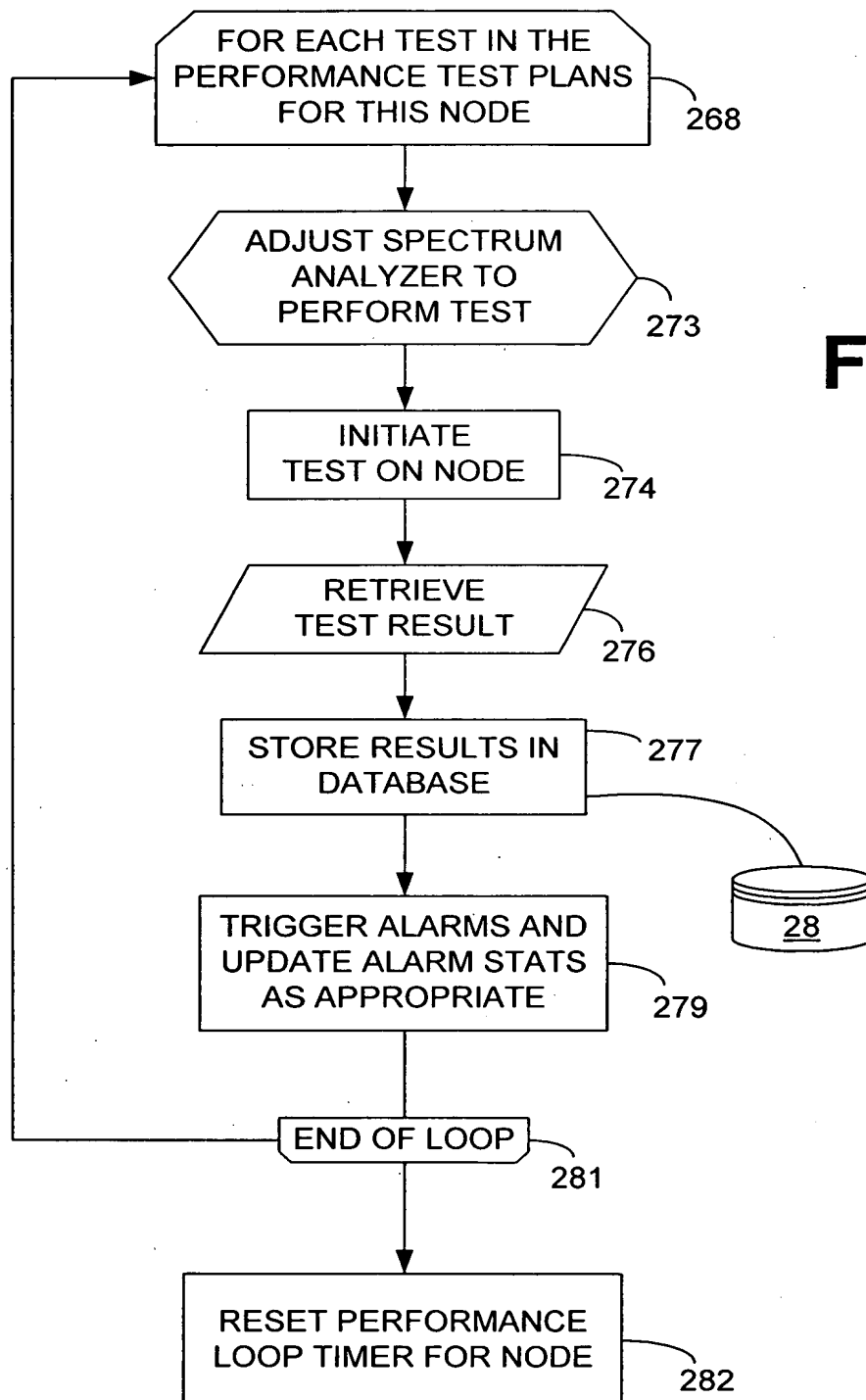


FIG. 9F

275
↓

**AUTOMATIC MODE
(SECOND EMBODIMENT - CONTINUED)**

ADJUST DEFERAL SCORES LOOP

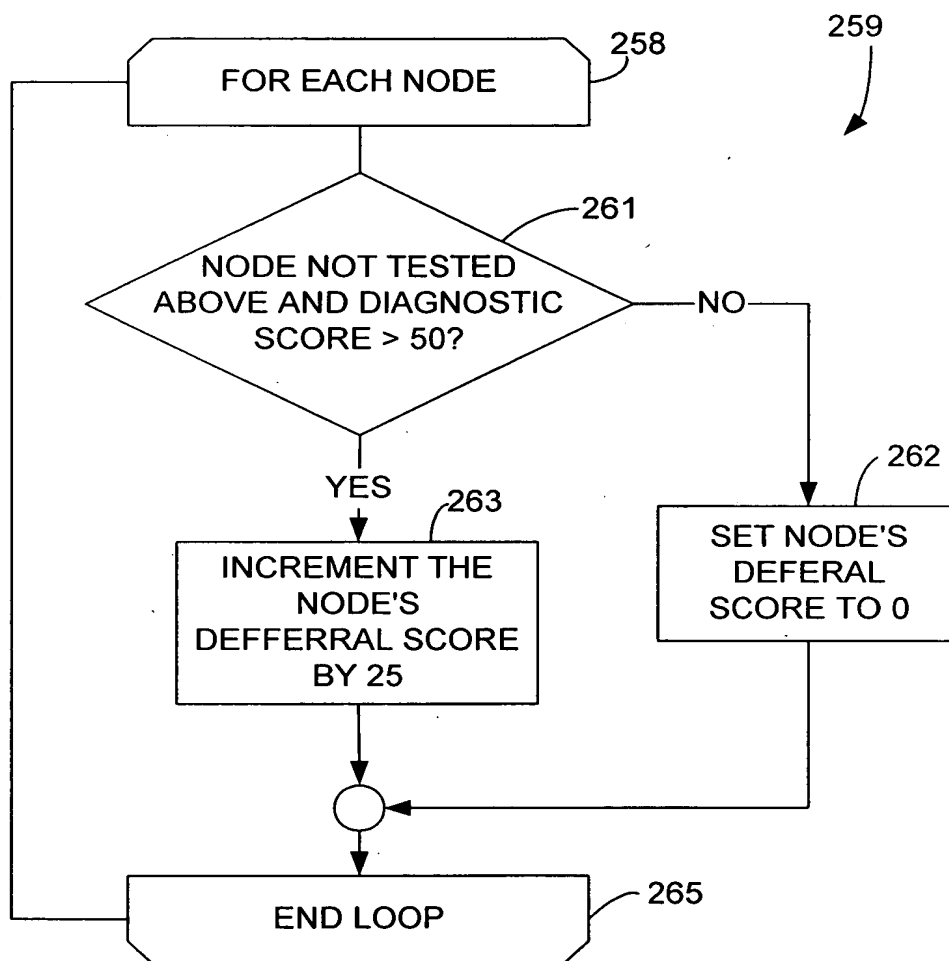
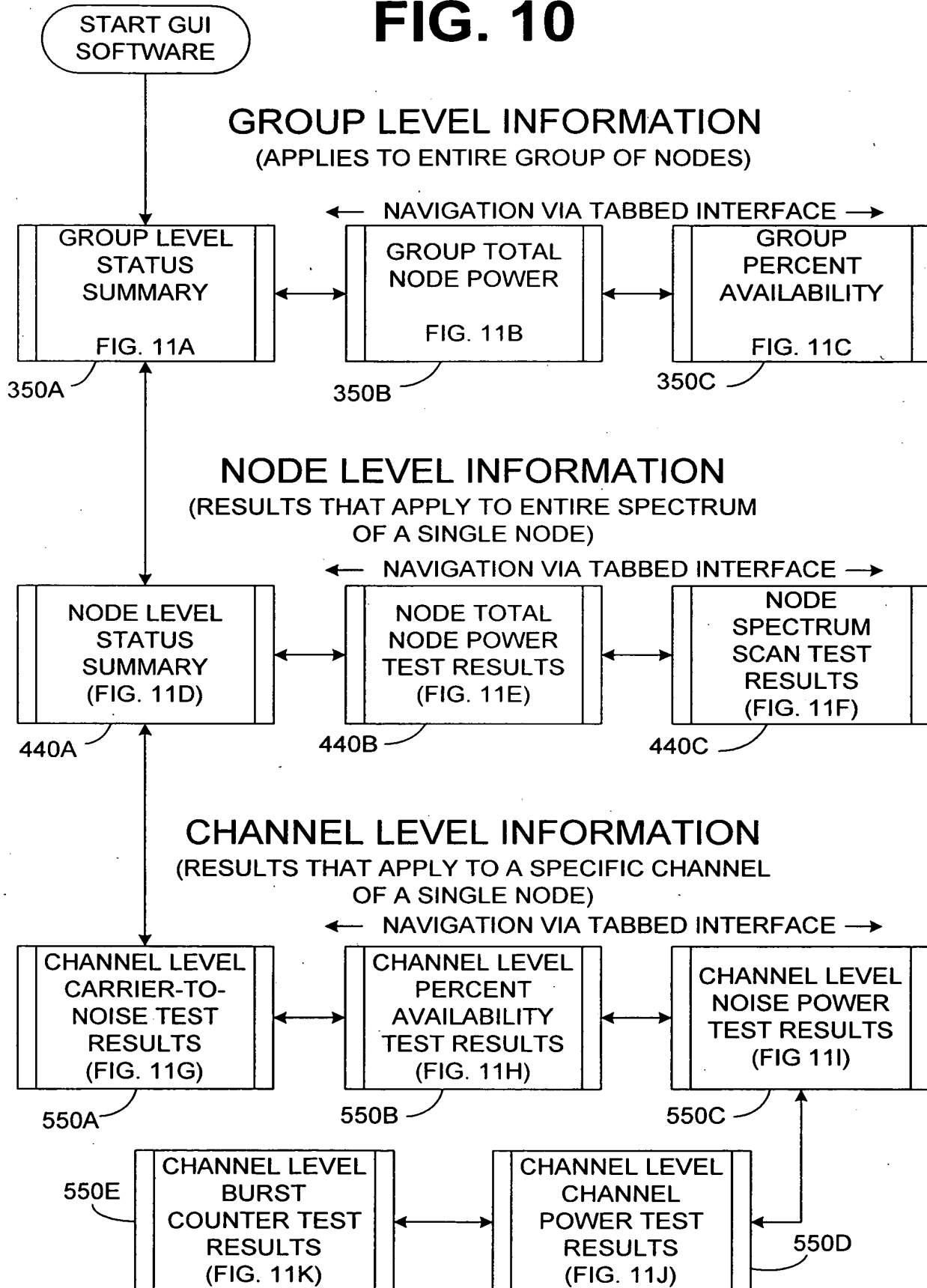


FIG. 9G

FIG. 10



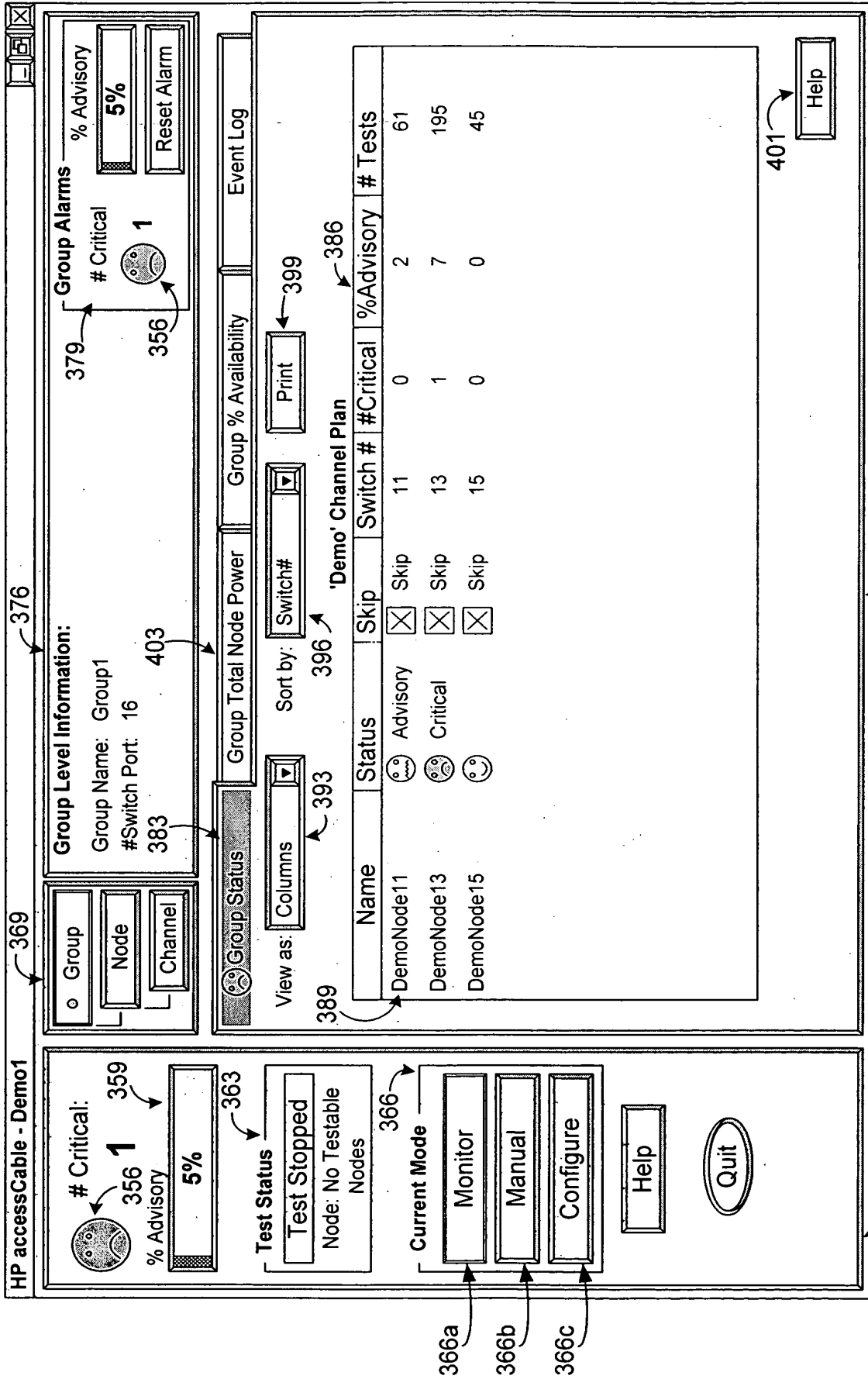


FIG. 11A

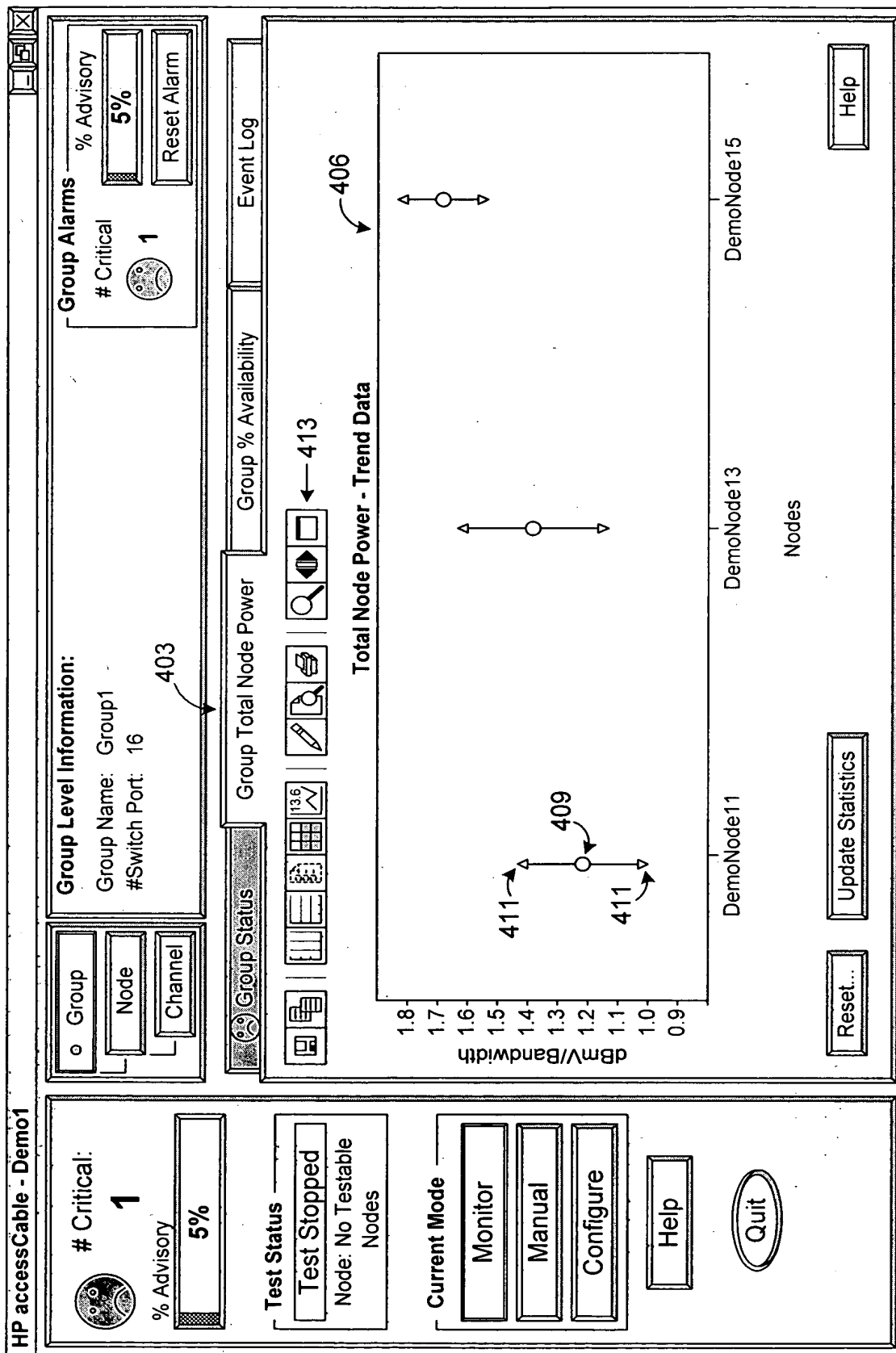


FIG. 11B

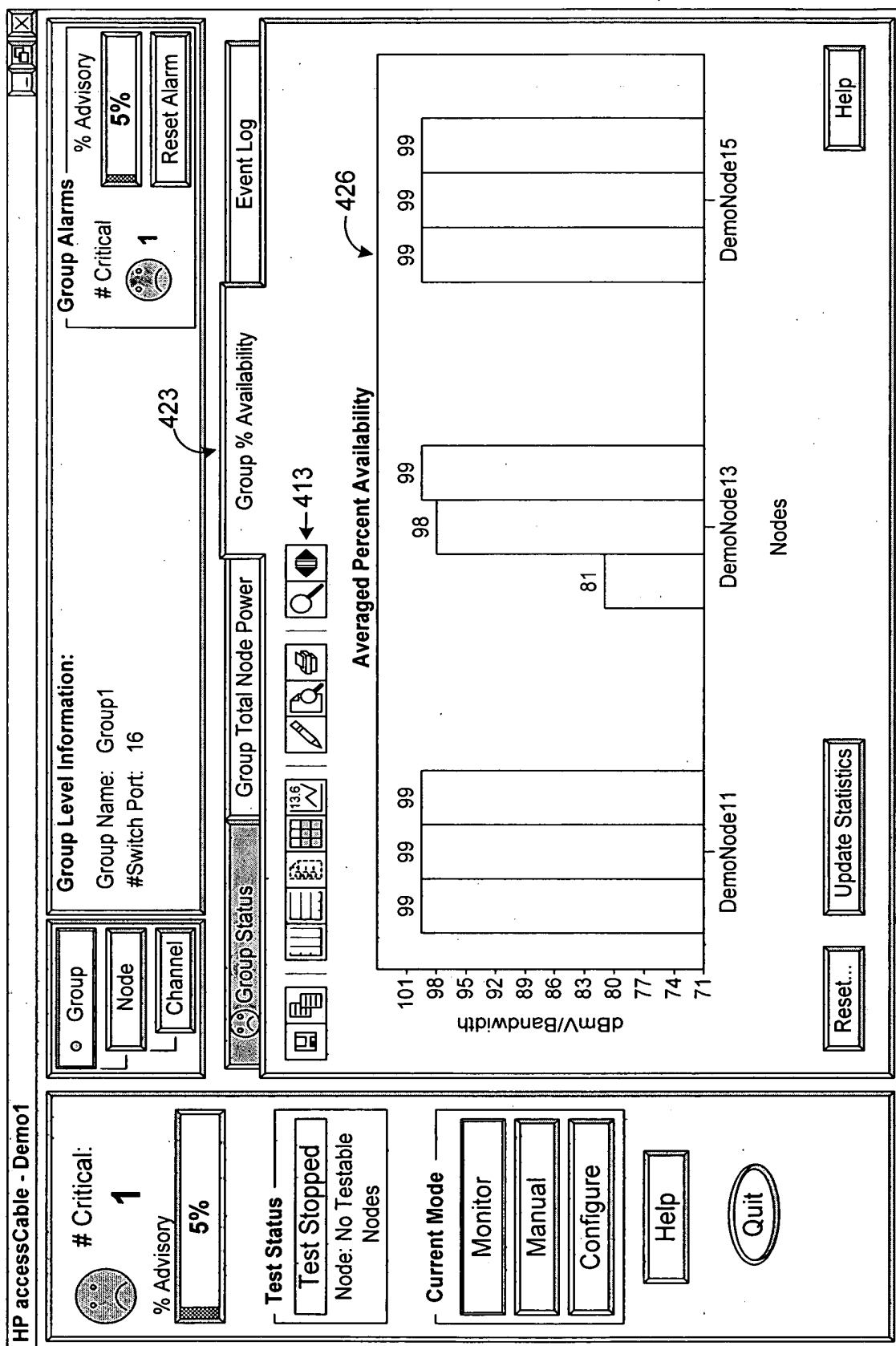


FIG. 11C

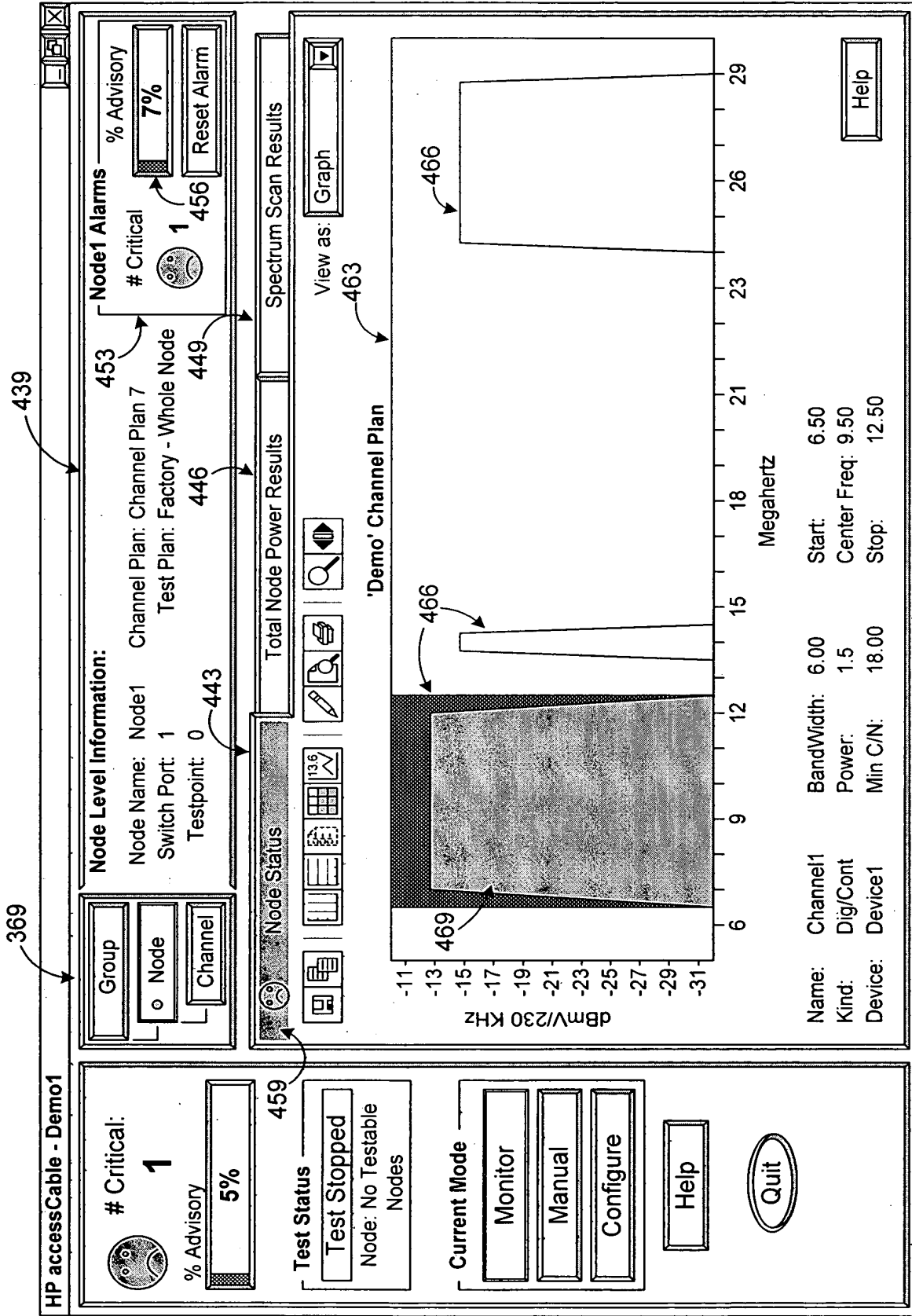


FIG. 11D

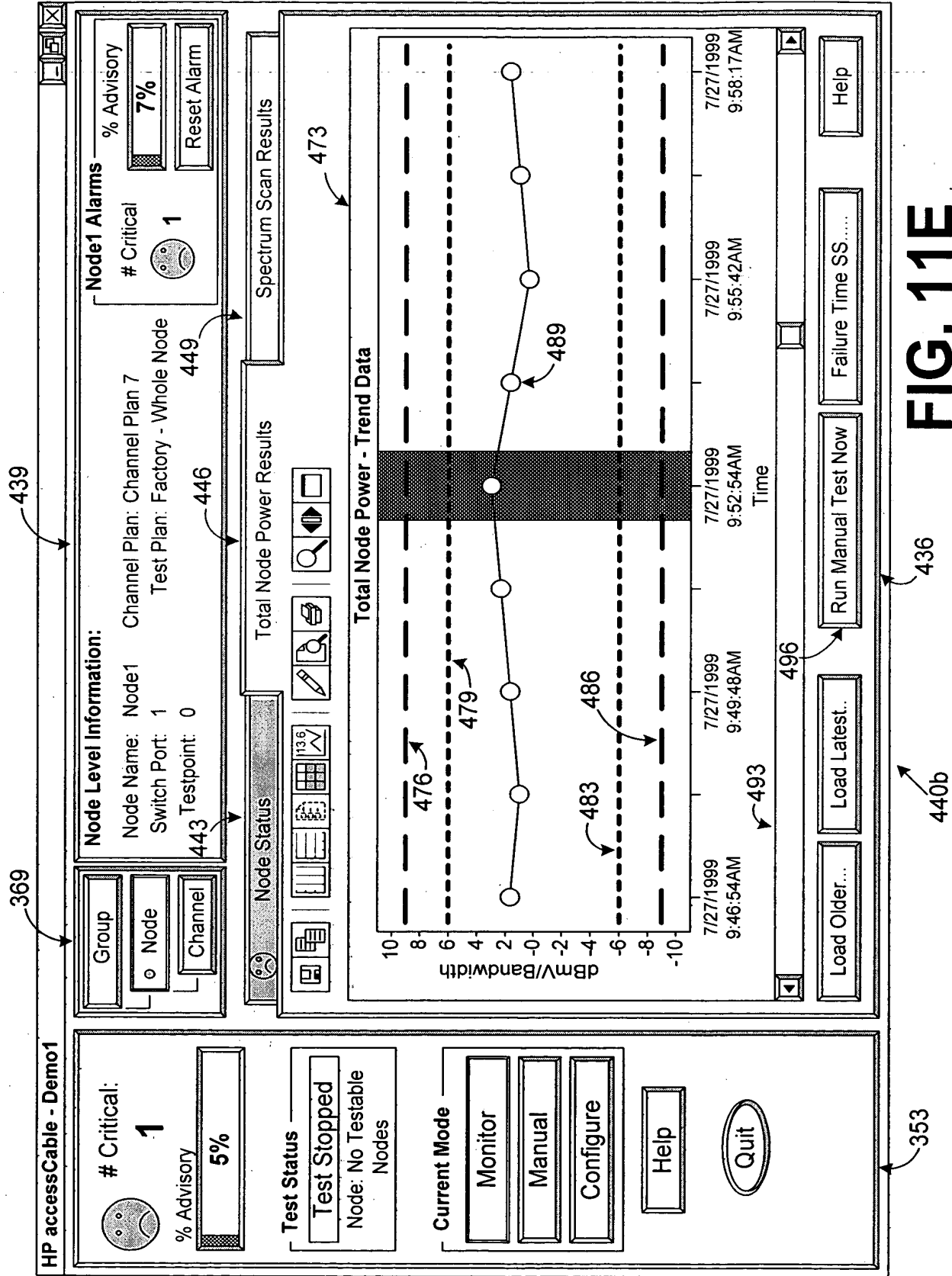


FIG. 11E

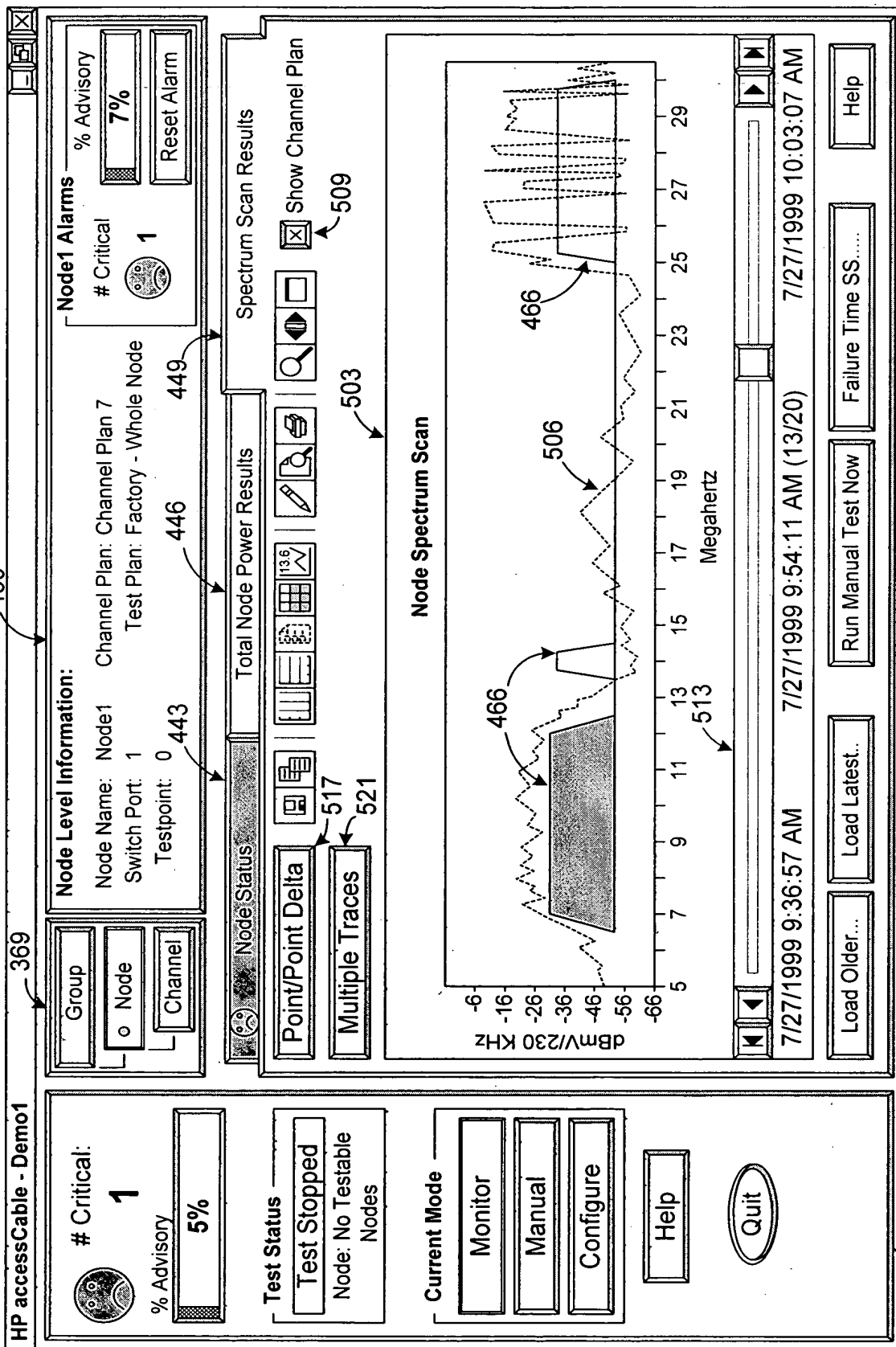


FIG. 11F

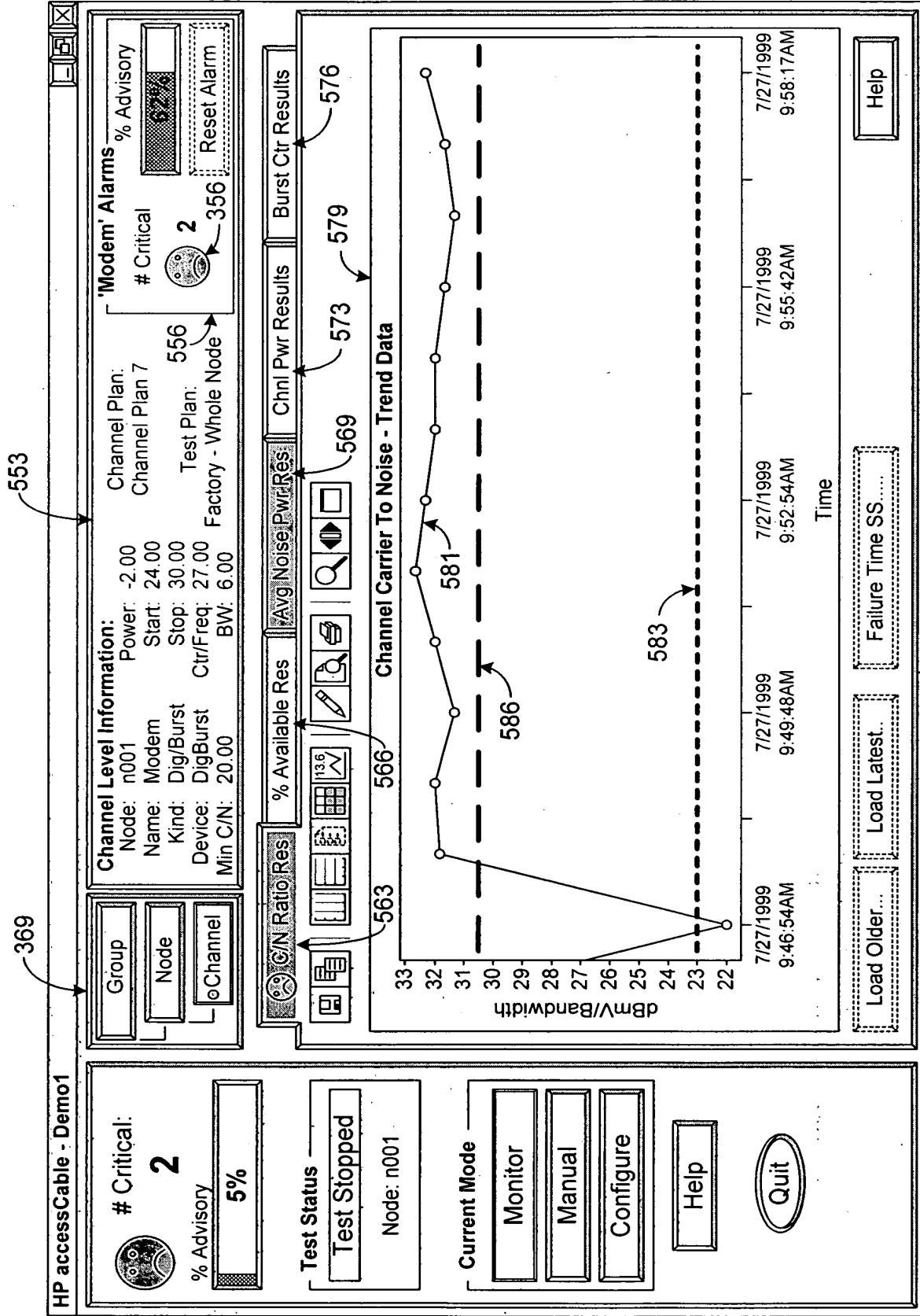


FIG. 11G

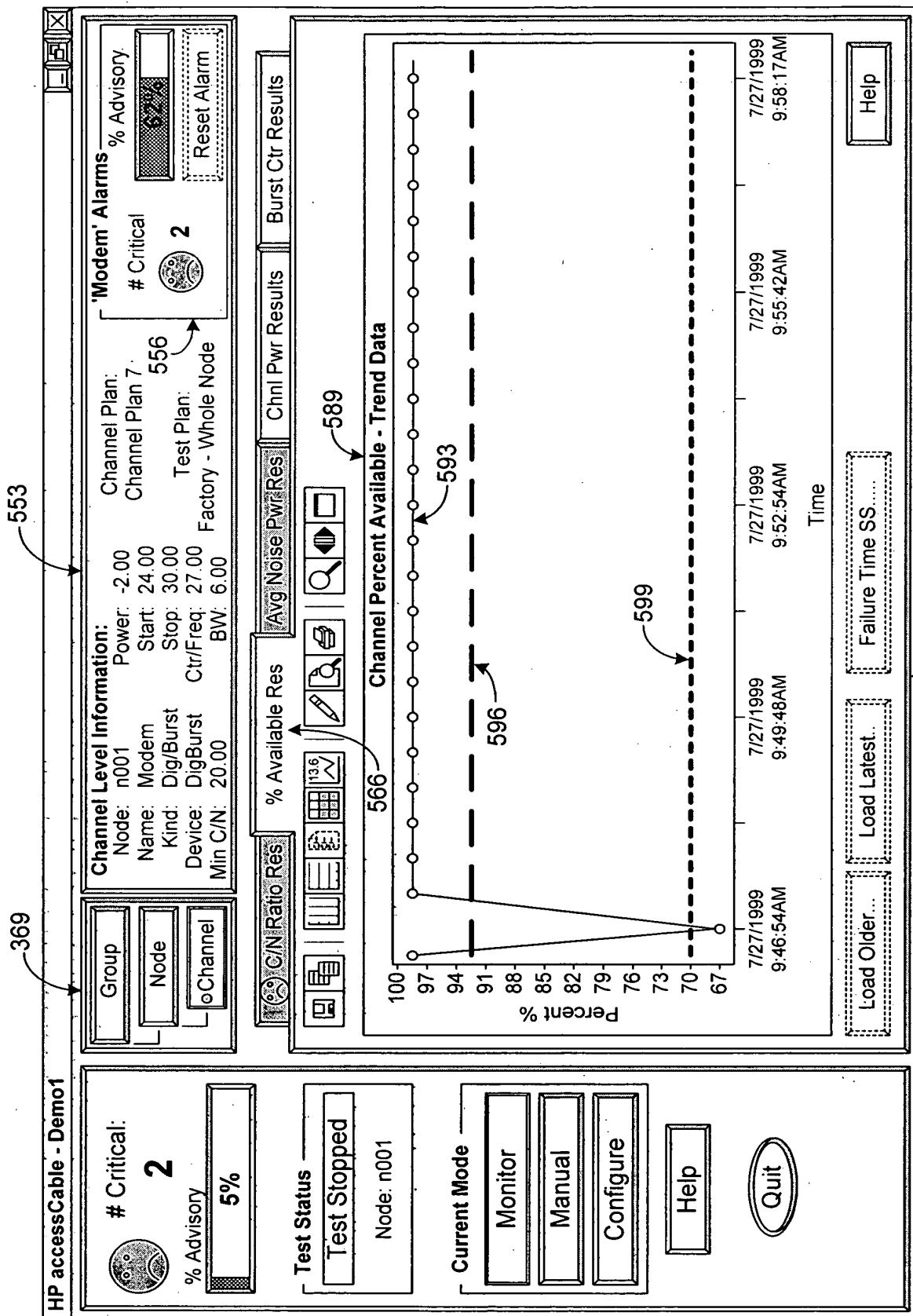


FIG. 11H

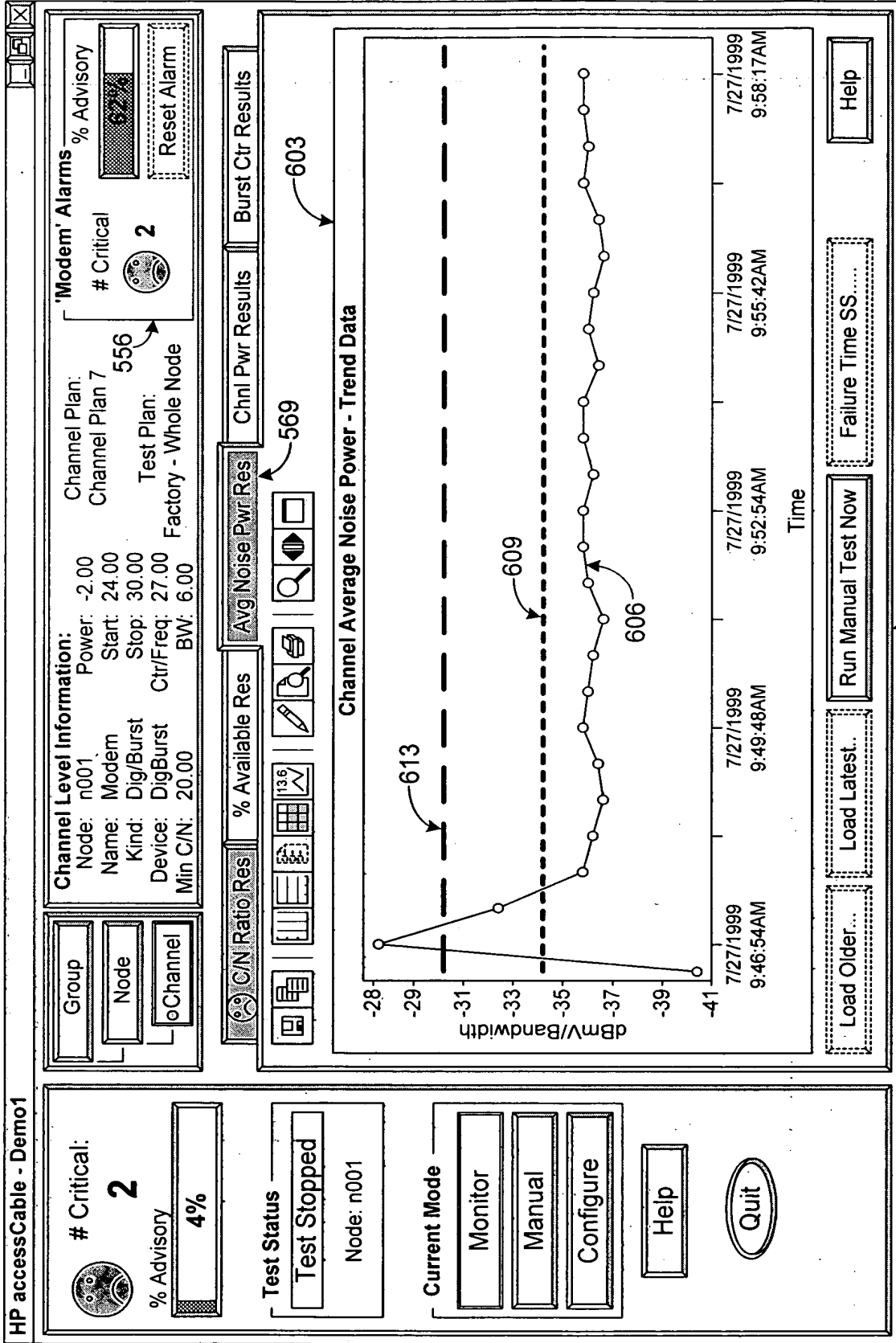


FIG. 111

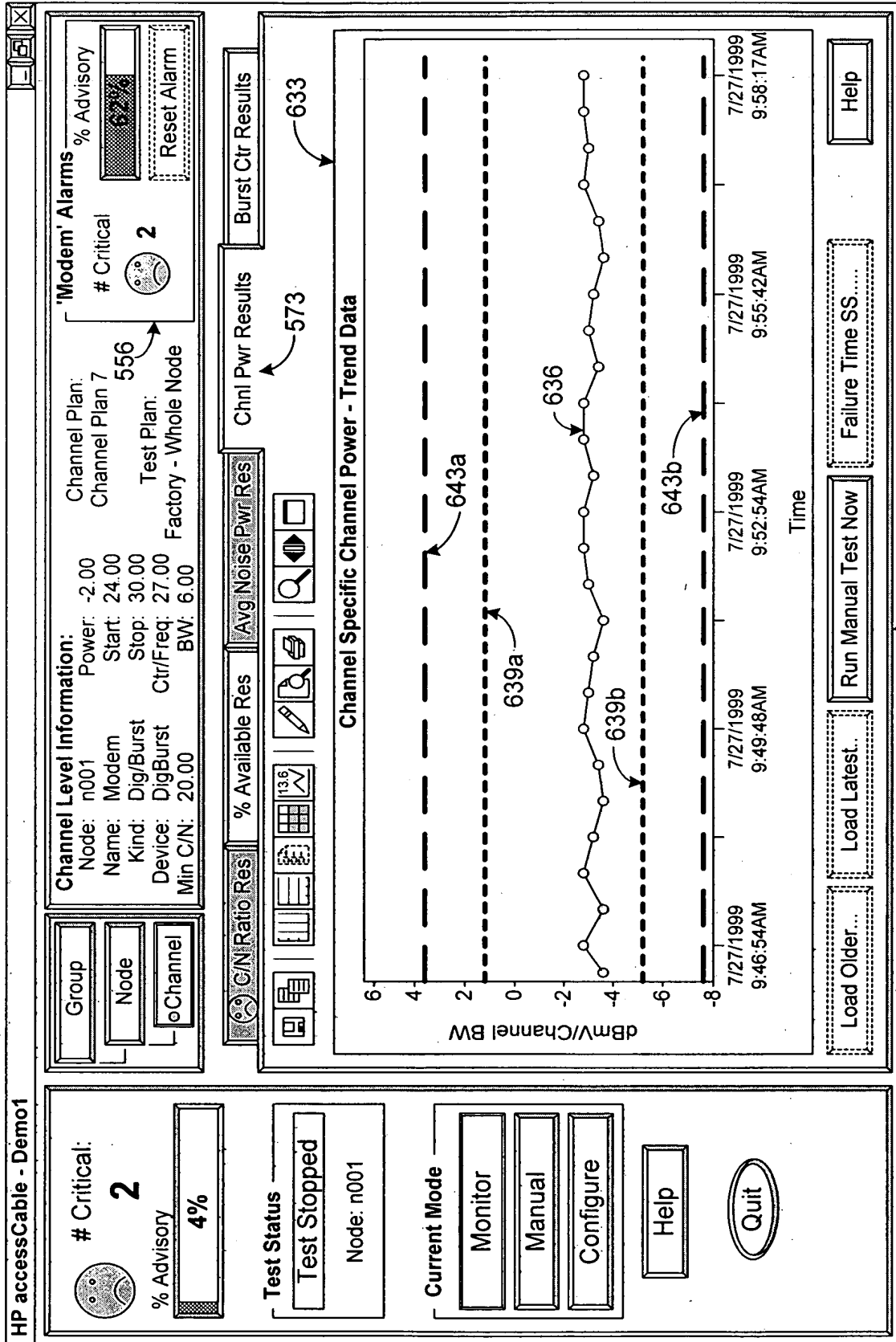


FIG. 11J

559

550d

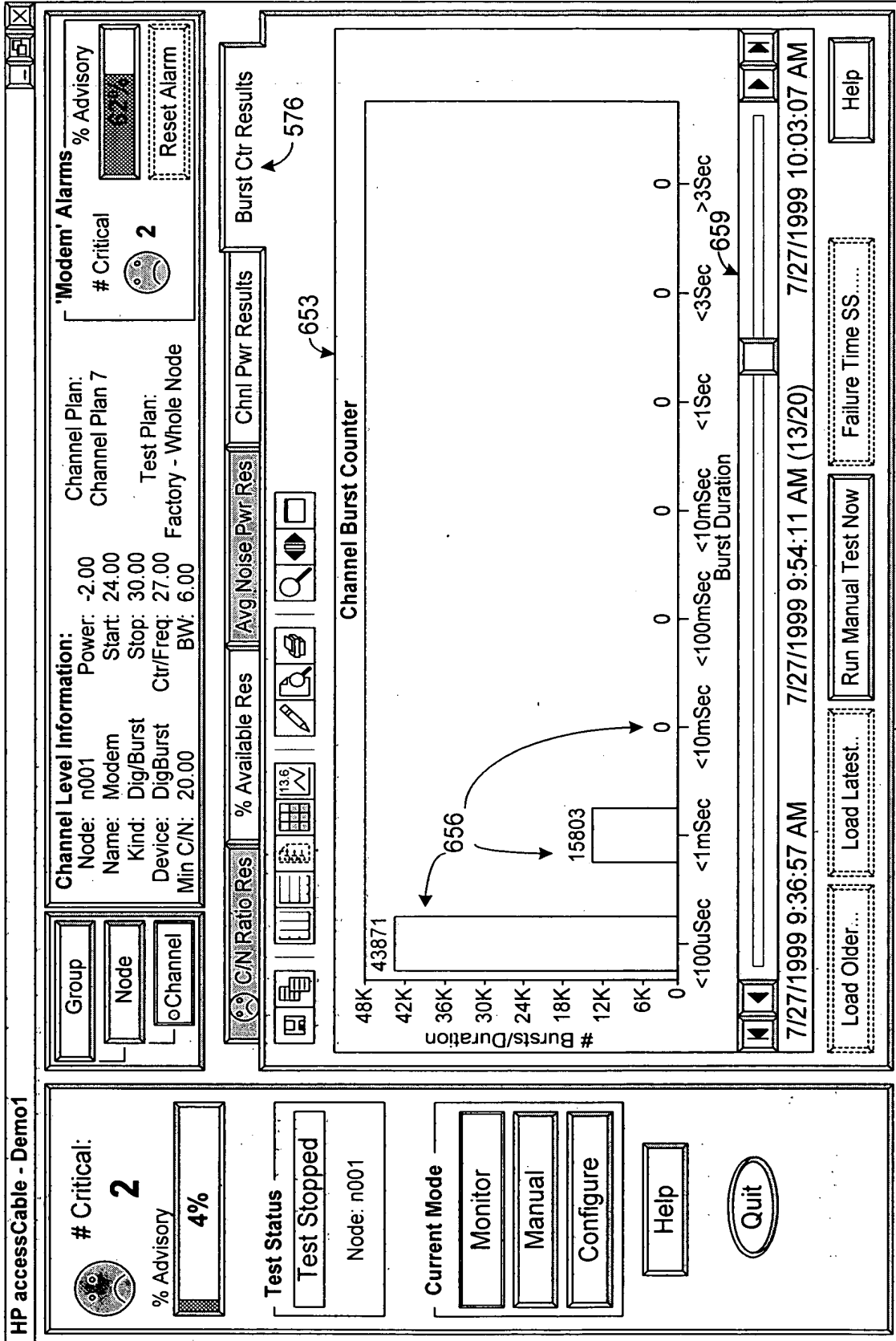


FIG. 11K

TEST CONFIGURATION GUI NAVIGATION

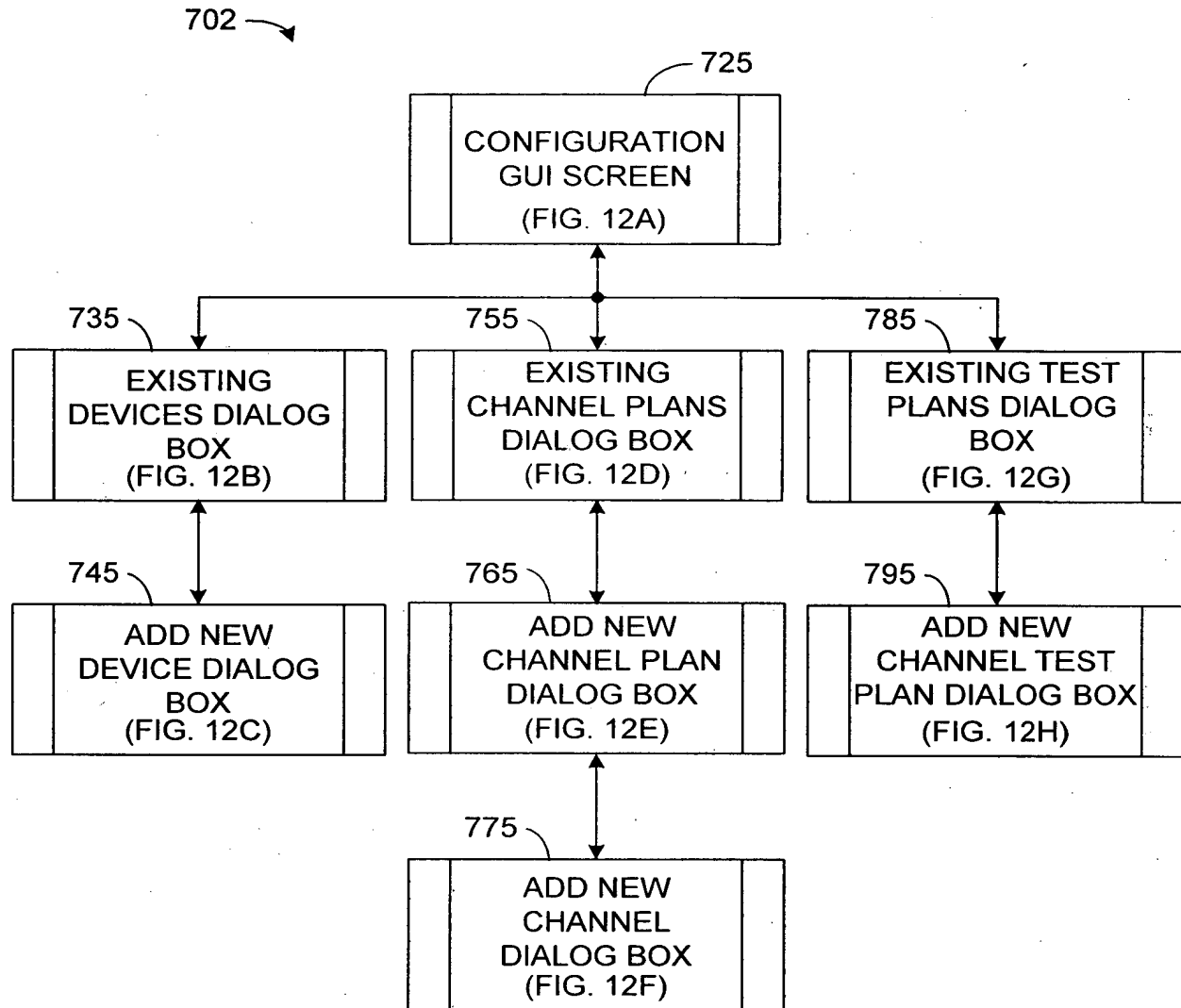


FIG. 12

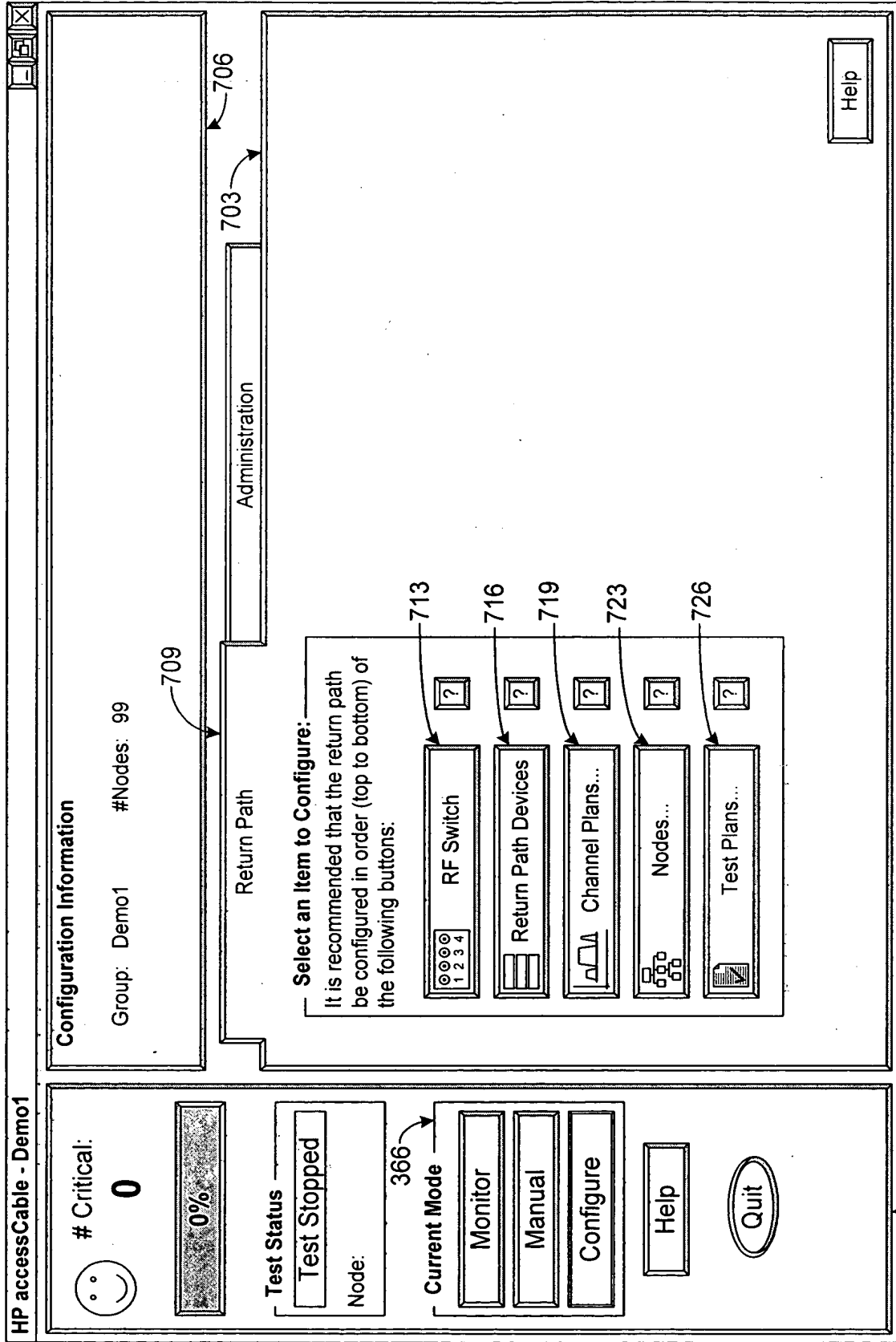


FIG. 12A

Existing Devices

Print...

Existing Devices

736

Name	Bandwidth (MHz)	Power (dB)	Min Op. C/N	Type	Comment
Modem	5.00	-2.00	20.00	Dig/Burst	

739

Add New...

Edit...

Delete...

Close

Help

FIG. 12B

Add a New Device

Add A New Device

Device Attributes

Device Name: 756

Comment: 759

Bandwidth: 763 ☒ MHz (0 - 999) ☐ KHz(0 - 999,999) 764

Channel Power: 776 (dBmV over Bandwidth)

Min Op. C/N: 769 (dB offset from Power)

Type: 773

776 779

753

FIG. 12C

Existing Channel Plans

Existing Channel Plans

Name	Start Freq	End Freq	#Channels	Test Plan	Comment
Default Return Path	5.00	42.00	2	Factory - Whole Node	

Add New...

Edit...

Copy...

Delete...

Close

Help

FIG. 12D

Channel Plan

Add a New Channel Plan

Channel Plan Attributes:

Device Name:

803

Whole Node Test Plan:

Factory - Whole Node

Comment:

809

This is Channel Plan B

Return Path:

816

0

Start Freq (MHz):

819

5

Stop Freq (MHz):

42

Channels:

View as:

826

List

Sort By:

829

C-Freq

Print...

833

836

Name

Start Freq

Stop Freq

C-Freq

B-Width

Power

Min C/N

Device

CHKind

Test Plan

Add New...

Edit...

Copy...

Delete...

OK

Cancel

Help

823

800

FIG. 12E

Add a New Channel

Channel Attributes

Name: 853

Center Frequency

856 Cnt Freq (MHz) 5 42

☒ Values from a Device 863
 ☐ Values Specified Below

Device: 859
(Description)

Bandwidth: (MHz) 866 869
 Channel Power: (dBmV over Bandwidth) 873
 Min Op. C/N: (dB offset from Power) 876
 Channel Type:

Test Plan: 879

881
 883

FIG. 12F

850

Existing Test Plans

Print...

906

903

Name	Type	Node Pwr	SScan	Noise Pwr	Chan Pwr	Burst	C/N	% Avail
Factory - Analog Continuous Channel	Channel				X		X	X
Factory - Analog Intermittent Channel	Channel						X	X
Factory - Digital Burst Channel	Channel			X	X	X	X	X
Factory - Digital Burst FreqHopping Channel	Channel			X			X	X
Factory - Digital Continuous Channel	Channel				X		X	X
Factory - Digital Continuous FreqHopping...	Channel						X	X
Factory - Future Channel	Channel						X	X
Factory - Whole Node	Whole...	X	X					
No Tests	Channel							

909

911

Add New Whole Node Test Plan...

Add New Channel Test Plan...

Edit...

Copy...

Delete...

913

Close

Help

900

FIG. 12G

Add a New Channel Test Plan

Add A New Channel Test Plan

Test Plan Name:
Test Plan 27

☐ Disable All Critical Alarms

☐ Disable All Advisory Alarms

☒ Average Noise Power

Alarm limits are relative to expected channel power minus min op c/n for the channel.

☐ Critical

>

3

(dB)

☐ Advisory

>

3

(dB)

☒ Carrier to Noise

Alarm limits are relative to the channel's min op c/n level.

☐ Critical

>

3

(dB)

☐ Advisory

>

9

(dB)

☒ Burst Counter

Alarm limits are not applicable.

☐ Critical

Not Alarmable

☐ Advisory

Not Alarmable

☒ Channel Power

Alarm limits are relative to expected channel power level.

☐ Critical

>

3

(dB)

☐ Advisory

>

3

(dB)

☒ % Available

Alarm limits are absolute percentages.

☐ Critical

<

60

%

☐ Advisory

<

90

%

OK

Cancel

Help

925

FIG. 12H